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Article

A Proposal of a Scale to Evaluate Attitude of People Towards Social Metaverse

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Abstract

Big players of information and communication technologies are investing in the metaverse for their businesses. Meta company, as main player of social media worldwide, is massively developing its "social" metaverse as a new paradigm by depicting it with nice and endless features and by expecting to turn current socials into it. What would be the attitude of users towards this future scenario? Very few studies specifically focused on this question have been found. In this work a scale for assessing the attitude of people towards social metaverse has been developed. A questionnaire composed of 38 Likert items, inspired by such features of social metaverse, has been generated and administered to 184 Italian subjects; the results have been analyzed with exploratory factor analysis; the final scale is composed of 15 items gathered in 4 factors that have been interpreted. Aspects consistent both with preliminary work of the authors and with some previous works have been found. Considerations are made, also in relation to the analysis of contents of Meta.

Keywords: metaverse; scale; attitude; people; society; future

1. Introduction

The "metaverse" is described in several ways, thus there is no convergence on a unique definition of it. In general, the common concept is that the metaverse is a set of virtual worlds, online and shared on the internet, and users join it, participate in it by means of customizable avatars, interact and are allowed to do anything, including the realization of new digital contents. We cannot avoid citing, as a classic, the novel "Snow Crash" [1], deemed to be the first publication talking about the metaverse. Since many years, the topic of metaverse is raising and being developed; several studies have been done about several facets such as, for example, security, ethics, privacy, enabling technologies, user interfaces and intention to use.

The research done in [2] developed a taxonomy of types of metaverses and highlighted open issues related to social disparities, legal themes and to limits of the available devices. An interesting systematic review has been done in [3], mentioning and describing the components of metaverse and facing how social and neurosciences are involved in participation in the metaverse. The work reported in [4] debates the power of influence of "big techs" in the development of the metaverse and its relationship with behavior of the society. The authors of [5] designed a framework for the development of the visual part of the metaverse, including visualization methods, ways of interaction, graphics and methods for designing scenes. The research in [6] analyzed and designed a framework of enabling technologies for developing learning and education in the metaverse; this research also offers a history of the metaverse and of its main traits. Recent studies include also research about the intention of participating in the metaverse and the factors influencing behavior of users. In [7] an experiment assessed that, by using the Unified Theory of Acceptance and Use of

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Technology model [8], the immersive virtual reality (that is one of the enabling technologies of metaverse) is in general accepted and positively evaluated in the context of participation in municipal politics. The work [9] is about the topic of the acceptance, it assessed the constructs affecting the acceptance of the metaverse technologies for tourism industry with a focus on the so-called "Gen Z" [10] and "Millennials" [11] subjects; findings showed that the pricing value, facilitating conditions, social influence and the intention to visit are relevant constructs. The study [12] carried on research to identify, by means of a specific theoretical framework, the reasons to adopt the metaverse (new immersion, shopping and social experience) or not adopt it (perceived lack of control, privacy issues, strain). The research in [13] developed a detailed analysis, after a literature review, for screening theoretical models suitable for assessing how metaverse technologies influence the cognitive, affective and emotional facets of human behavior in social life.

In a preliminary work [14] authors have analyzed the contents of main big-tech companies (Microsoft, Apple, IBM, Siemens, Meta -former Facebook) by finding that metaverse is mainly considered as a tool, a platform for business purposes or for entertainment, while on the other hand Meta places itself in the realization of metaverse as a new virtual social world (from now on, "social metaverse"). Meta is fully aimed at realizing it by expecting 1 billion users in about ten or so years [15]. In the vision of Meta the social metaverse will involve people of society, starting from the users of current existing social media platforms. Such a metaverse is described and advertised as a new online virtual space where everyone can meet and share experiences with anyone and where people are allowed to feel good. In this context of development of immersive social media for the future, it is reasonable to raise a question: would people like such a "social" metaverse with such features, immersed in virtual reality and with huge potential?

Two literature reviews done in the preliminary work showed that there are very few works specifically aimed at assessing the position of people on the question stated above. These works ([16-19]) are not properly focused on that question, but they are among the few ones approaching, maybe not in a direct way, the opinion of people; they are described in Paragraph 2.

In summary, the works specifically focused on assessing the "accordance level" of people with the (perspective of a) social metaverse are few. The aim of this work is to develop a scale for assessing the attitude of people towards a social metaverse shaped with the features promoted by Meta.

2. Related Works

Some works from the previous literature review ([14]) have been found to be related to the topic of assessing what opinion of people is regarding a social metaverse; a concise description of such findings follows.

The work in [16] conducted a study about the perception of people about the metaverse. A sample of 220 subjects participated in an online questionnaire (18 items, most of them on a Likert scale). The questions ranged from opinions on metaverse (as the future, economy, evolution of internet, evolution of society, improvements of health care and education) to opinions on personal feelings about metaverse (as being disconnected from the physical world, being ready for it). The results are reported as, for each question, percentages of subjects selecting a specific answer. The interesting result for the purposes of this paper is that around 37% have declared to be ready for the metaverse; the detailed description of all the results is reported in the study as well as the questionnaire. The study in [17] carried out research about the intention to participate in the Metaverse of Facebook by considering the influence of a) self-efficacy [20], b) support of institutions in training users about technology, c) soft skills in using office automation tools and common smart devices. To this aim, 410 subjects of Peru answered an online questionnaire with items on a 5-point Likert scale (an internal version of it is shown in the paper). Results showed that a), b) and c) factors influence positively the intention to participate in the Metaverse of Facebook.

The work [18] assessed the impact the metaverse can have on people, by administering a questionnaire (7 items, answers mainly in the form "Yes", "No", "Maybe"). The questionnaire was developed after a deep consultation with a pool of experts from the health sectors (such as

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psychology, neurology, therapy). The results, shown in the paper, are reported as percentages of subjects selecting a specific answer for each question. Main results showed that 53% did not know what metaverse is, 57% are excited about metaverse, while the percentages of concerns about metaverse are not in favor to metaverse (for example, 47.4% answered "Yes" to the question: "Do you think a Metaverse could create a physical communication gap between humans, and also cause hindrance in physical relationships?").

The work done in [19] is twofold. On one side, a thorough dissertation, grounded on a literature review, has been done about the ethical implications of metaverse on the life of every day; on the other hand, the study reports the results of interviews (sources in [21-25]) where answers highlighted the presence of concerns and doubts about the rise of a metaverse (for example, 68% answered "Not that / At all interested" to the question: "Based on what you know, how interested are you in using Facebook's new virtual reality project, metaverse, which would allow users to interact with each other in a computer generated environment?"; for example, an excerpt of answers to the question: "Which of the following best describes how you feel about Metaverse? Select one." is: "Curious=33%2, "Uninterested=27%", "Suspicious=23%, "Concerned=19%" [22, 23]).

In the present work literature has been screened again to select potential new works about the topic of assessing the attitude of people towards the social metaverse. Two literature searches, let's call them S1NEW and S2NEW, have been done in the Web of Science (WOS) [26] and Scopus [27]. The same search strings used in [14] were initially used (see Appendix A); raw results have been filtered by selecting only: documents in English language, journal articles, conference proceedings papers and finally published documents.

The raw result of S1NEW (in the range 01 January 2023–01 July 2025) returned 195 documents (70 from WOS and 125 from Scopus). The PRISMA flowchart of the process is shown in Figure 1. After reading the title and the abstract to check whether the topic could be interesting, 8 papers have been selected. After a full read (or a careful read of the abstract, in case of full paper not accessible) 3 papers were selected (the full document of 2 of them was not accessible). Nevertheless, the 2 papers with abstract only have been considered because of a very low number of results.

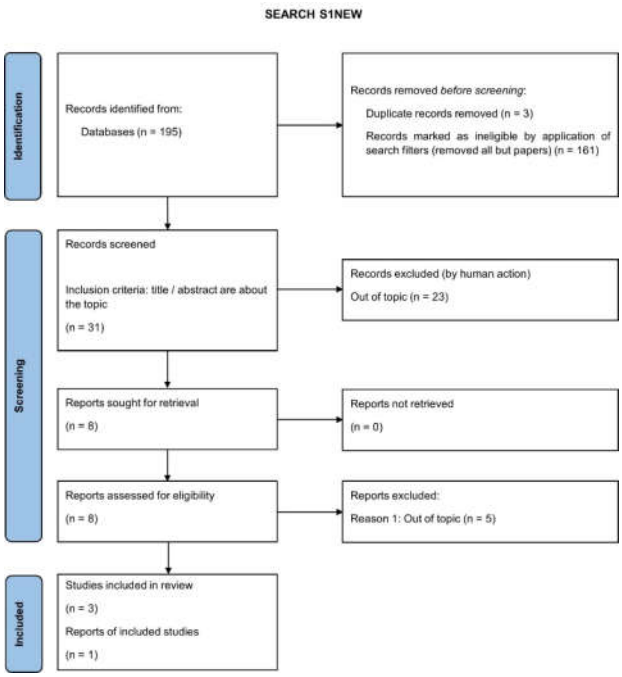

Figure 1. The PRISMA flowchart of the literature search S1NEW.

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The raw result of S2NEW (in the range 01 April 2024–01 July 2025) returned 2904 documents (1452 from both WOS and Scopus), the PRISMA flowchart of the process is shown in Figure 2.

After a further filtering (done in WOS by excluding databases with titles out of scope such as MEDLINE, KCI-Korean Journal Database, BIOSIS Citation Index, Science Citation Database, SciELO Citation Index; done in Scopus by including only the subject areas of "Computer Science", "Social Sciences" and "Psychology") the entries count decreased to 1082. After reading the title and the abstract to check whether the topic could be interesting, 8 papers were selected. After a full read (or careful read of the abstract, in case of full paper non accessible), 2 papers have been selected (the full document of one of them was not accessible). Nevertheless, the paper with abstract only has been considered because of a very low number of results.

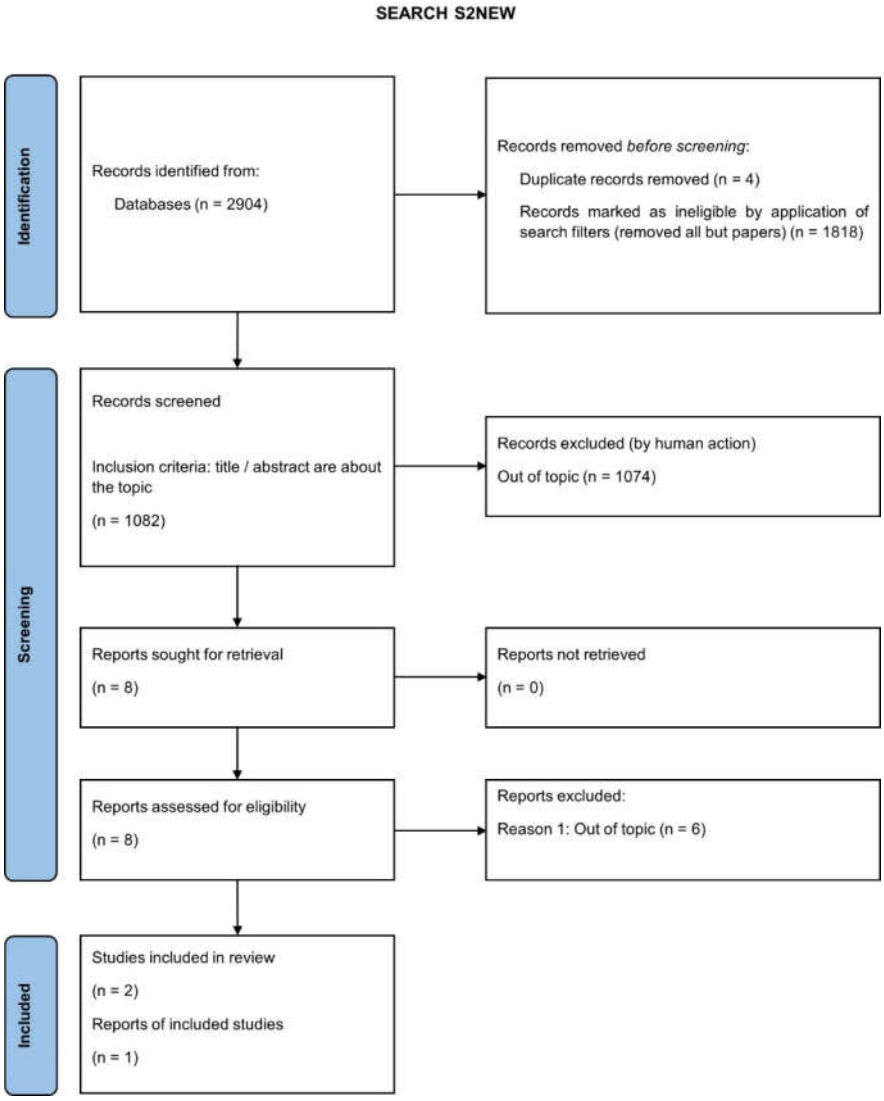

Figure 2. The PRISMA flowchart of the literature search S2NEW.

In summary, the results of the literature screenings S1NEW and S2NEW are the works [28-32]; a concise description of such findings follows.

The work in [28] studied what are the factors that can impact on accepting or not the metaverse, given that a gap on this topic has been found in literature; the need to debate this matter from the perspective of people is also emphasized as further motivation. Semi-structured interviews were administered to a sample of 16 subjects (both users of social media and people not interested in metaverse) by inspecting the facets of personal perceptions about metaverse, reasons of refusing accessing it, risks and concerns. The results, processed also according to Technology Acceptance

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Model (TAM) [33] and its extensions, showed that perceived usefulness, ease of use, enjoyment, connectedness and risks were the dimensions driving the reluctance in accessing metaverse; the themes involved by each dimension are specifically described.

A similar argument is analyzed by work in [29]. The study analyzes the factors influencing the intention to adopt the metaverse. A sample of 420 subjects took part in a study based on a structured theoretical model, grounded on Unified Theory of Acceptance and Use of Technology v2 (UTAUT2) [34] and on Pleasure-Arousal-Dominance theory (PAD) [35] in the context of the Stimulus-Organism-Response framework, for defining such factors. As stated by the authors, results indicate that immersive experience and social influence are the elements most impacting on the perceived value (on using metaverse), that is the item impacting on intention to adopt the metaverse; in their turn, users perceive value in the presence of fun, enjoyment and security. These elements should be considered by stakeholders, designers and developers of the metaverse to realize such attractive features and provide good services to users.

The research done in [30] is also about the factors influencing the acceptance of the metaverse by potential users. A total of 418 subjects (who are metaverse users) answered an online survey; the analysis of collected data has been grounded on the Technology Acceptance Model that has been expanded by including the constructs of social interaction and presence, conformity, emotional attachment, flow and perceived enjoyment. The main remarkable results are twofold: on one side, the intention of using the metaverse can be positively influenced by the constructs of perceived usefulness, attitudes, flow and social interaction; on the other hand, the attitude toward using the metaverse is positively affected by the constructs of perceived usefulness, perceived ease of use, emotional attachment and social interaction. Also in this study, the authors claim that stakeholders should consider these findings for developing effective and useful metaverse applications.

The work in [31] did an explorative study on young people in Germany for analyzing perceptions about the metaverse. A sample of 115 subjects aged Gen Y [36] and Gen Z answered to an online questionnaire of 33 items on a 5-point Likert scale (from “Strongly disagree” to “Strongly agree”). The areas covered by the questionnaire were multiple and a thorough analysis of results has been described for each area. In the context of this paper, we would like to mention the most rated answers for some of the covered areas: Gaming And Entertainment, Social Connections are the top scenarios for the area “preferred used scenarios”; Psychological Harm Or Harassment, Addiction, Loss Of Relations Of Real World are the main problems for the area “perceived problems and challenges”; Being Spied On is the top worry for area “personal worries regarding virtual worlds”.

The research in [32] studied the intention to adopt the devices and the applications of metaverse by Gen Y users in the Malaysian context and to assess the motivation of consumer to enter the metaverse. A questionnaire of 41 items on a 5-point Likert scale (from “Strongly disagree” to “Strongly agree”) has been filled by a total of 205 subjects suitable for analysis. The items have been taken from sources already existing in the literature (referenced in the paper). The raw results have been analyzed with a model extending TAM by integrating also the constructs of “Perceived Enjoyment”, “Personal Innovativeness in Information Technology” and “Immersion and Sense of Presence” -this last one as driver of intention to adopt the devices and the applications of metaverse. Findings show that the involved constructs exert a positive impact and influence on the “Immersion and Sense of Presence” that drives the intention of adoption; moreover, the “Perceived Enjoyment” is the element most influencing the intent object of the study.

To summarize, studies about the opinions of people, of users and their intention to adopt the metaverse are mainly grounded on constructs of theoretical models (for example, TAM, UTAUT) aimed at assessing the intention to use, the acceptance of systems and technologies. The feature of “social purposes” of metaverse is, in general, implied; the focus on the type of social metaverse specifically proposed by Meta is generally missing, although Meta is, in actual fact, a (the) potential leader company in this field. Thus, in this work we tried to partially fill this gap by developing a scale for assessing the attitude of people towards a social metaverse with the specific features promoted by Meta. To this end, the present work is composed by 4 parts: (Section 3) development of an

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explorative questionnaire about social metaverse as a base of information on the thoughts of people about the proposed topics; (Section 4) administration of the questionnaire; (Section 5) analysis of the results with exploratory factor analysis (EFA) to identify the principal topics underlying the answers, to reduce the items of the questionnaire (if possible), to form the scale; (Sections 6 and 7) considerations and conclusions.

3. Development of the Questionnaire

According to what emerged in the previous work of the authors ([14]), the main features shaping the metaverse proposed by Meta are summarized by the following tags Ti (shortly described in Table 1): T1="New social platform"; T2="Flooding mobile phones / devices"; T3="New internet"; T4="Doing activities of daily living"; T5="People meet / share experiences"; T6="Tearing down the boundaries"; T7="Living life in the metaverse". These are the concepts, latent or explicit, that are promoted by Meta while presenting and showing its vision of metaverse. The tags T4-T7 have been used for the work, T6 and T7 are the most frequent in the contents of Meta. The tags T1, T2 and T3 have not been used because they are more related to the concepts of evolving technology, of new functionalities in the expansion of smart devices and apps.

Table 1. The tags representing the main concepts of social metaverse promoted by Meta are shown. On the left column: the tag Ti with its "title"; on the right column: a short description of the meaning of Ti. Source: [14].

Tag Ti – Represented concept	Description
T1-New social platform	The metaverse will be the new platform for new social media.
T2-Flooding mobile phones and devices	The metaverse will run on most devices as possible - smartphones, tablets, headsets, computers and other smart devices.
T3-New internet	The metaverse will be the new internet with infrastructure of contents.
T4-Doing activities of daily living	People can do (or are "encouraged" to do) in the metaverse the usual activities of their life.
T5- People meet actively / share experiences	People, with particular attention to relatives and friends, meet in metaverse and together they do actions and / or share experiences (depending on the context of specific sentence, this may evoke -also implicitly- no need to do it in reality).
T6-Tearing down the boundaries	The metaverse allows to do anything by tearing down the boundaries/ barriers / limits of reality (depending on the context of specific sentence, this may be also implicit).
T7-Living life in the metaverse	People can do / transfer actions typical of real life in the metaverse.

An explorative questionnaire of 38 items has been developed inspired by the investigated contents of Meta and summarized by tags T4-T7. The questions are on a 5-point Likert scale ("Strongly disagree", "Disagree", "Neither agree nor disagree", "Agree", "Strongly agree"), they are sentences about the concepts developed on the tags T4-T7 and strive for eliciting from the subject

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positive (negative) attitude towards them. The original versions of the questionnaire in the Italian language and its translation in the English language are in Appendix B.

The questionnaire has been implemented with Microsoft Forms [37] and has been administered online; it is composed of a starting page and three parts.

In the starting page are reported the purpose of the project, the conditions of inclusion and the personal data treatment statement and the informed consent is acquired. Moreover, further details about the study were available at a specific link.

In the first part the following demographic information have been collected: age range (selection among predefined ranges, included "Other"), sex ("Male", "Female", "No Answer"), daily use of internet ("Yes", "No"), frequence of social media usage ("Every day", "Sometimes in the week", "Sometimes in the month", "I do not use social media"), familiarity with virtual reality ("Never heard of it!", "Yes I know a bit", "Yes I know it").

In the second part participants were shown a brief presentation of the social metaverse to ensure basic knowledge about it. The presentation is a brief sequence of slides introducing the basic concepts of social metaverse; all the images in the presentation have been collected from free online databases and from videos of Meta about the metaverse; in every image credits to the source are shown and, when needed, the sentence stating that the image is for demonstration only was shown as in the original videos.

In the third part the subjects filled the questionnaire of 38 items, randomized at each access. At the end, subjects were shown a message expressing gratitude for their participation.

4. Questionnaire Administration

According to the analysis on the Italian population in 2024 reported in [38], 94% people aged 16–64 use the internet for more than 5 hours per day and use social media platforms for more than 1.5 hours per day (mean values). People aged 18–54 cover about the 76% of users of current Meta social media platforms (Facebook, Facebook Messenger, WhatsApp, Instagram). The inclusion conditions for subjects were being aged 18–54, use internet every day and give consent to the personal data treatment. To potentially include the most heterogenous population as possible, no more inclusion conditions have been defined.

Subjects have been recruited by email, by social media and by personal contact, the URL of the questionnaire has been provided, it has been available for 1.5 months.

Given that the pool is composed by 38 items (the variables), the target of 190 subjects has been defined, by taking into account the considerations of [39] (the more the observations are the best it is), of [40] (at least twice the number of variables), of [41] and [42] (at least 5 cases per variables and not less than 100 cases; at least 100 cases and a 5:1 ratio of variables/cases).

5. Results

In this paragraph the results are described with the analysis of data.

5.1. General Information

Subjects that have filled the online questionnaire were 184, 9 subjects have been excluded because aged >54. The final sample consisted of 175 subjects, a bit less than the targeted one. In relation to the practical rule of a 5:1 ratio mentioned above, in this case the ratio is 4.6:1. IBM SPSS v29 has been used for processing data [43].

The results of the first part related to demographic information are here described.

54,9% of respondents (n=96) were female, 43.4% were male (n=76) and 1.7% gave no answer (n=3).

10.9% of respondents (n=19) were aged 18–22, 21.1% aged 23–30 (n=37), 24.0% aged 31–40 (n=42), 28.6% aged 41–50 (n=50), 15.4% aged 51–54 (n=27).

100% of respondents use internet daily.

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The frequency of social media usage is expressed as: "I do not use social media" 4% (n=7), "Every day" 89% (n=156), "Sometimes in the month" 3.4% (n=6), "Sometimes in the week" 3.4% (n=6). It is interesting to notice that in [38] the percentage of people aged 16–64 using social media is 96%, in the sample 96% of people (aged 18–54) use social media.

The familiarity with virtual reality is represented by: "Never heard of it!" 6% (n=1), "Yes, I know a bit" 49.7% (n=87), "Yes, I know it" 49.7% (n=87).

5.2. Checks for Feasibility of EFA

Preliminary checks on data have been made to ensure the feasibility of the EFA.

We would like to mention in advance that the EFA has been repeated because 6 items caused failures in the preliminary tests and in the analysis itself. Such 6 items have been removed (they are Item3, Item5, Item12, Item18, Item37, Item38) and the process has been repeated. Thus, the complete analysis has been done on 32 items.

Some of the preliminary checks have required to be made again and, if the case, "re-checked" will be mentioned in parentheses.

A check if results of the questionnaire fit for the normal distribution has been done by means of the inspection of skewness and kurtosis values and of detrended quantile-quantile plots values (Q-Q plots); the results have finally been found fitting enough for the normal distribution.

Results have been checked for potential outliers and finally no items have been selected as outliers. Given the subjective nature of the items, it may happen that a subject gives answers apparently contradictory (that would be a symptom of a potential outlier) but that are not. In fact, for each item, the boxplots of answers have been inspected and many, let's say, "regular" subjects showed in their questionnaire the same irregularities of those subjects deemed potentially outliers.

Correlations matrix R of items has been tested (re-checked) for the presence of values >=.3 (absolute value) to ensure that correlations are not negligible [44]: this is satisfied for more than half of the elements for both Spearman (65.92% of the elements) and Pearson correlations (66.73% of the elements, $p<0.01$ for all the values in the matrices, two tailed) as well as for the Kendall Tau-B (50.60% of the elements).

The Bartlett Sphericity test [45] (re-checked) and the Kaiser-Meyer-Olkin (KMO) test [46] (re-checked) confirmed the sampling adequacy by providing, respectively, $p<.001$ and a score of .921 that is ranked as "marvelous" according to classification in [46].

Checks on the anti-image correlation and covariance matrices have been done too (re-checked). In the anti-image correlation matrix, about 21% and 11% of elements exceeded pragmatic thresholds of, respectively, .12 and .15 (that are a bit relaxed thresholding values instead of the default value of .1; absolute values); in the anti-image covariance matrix about 12% of elements exceeded the threshold of .1 [47-49]. The above percentages are <25%, according to what was suggested in [47]. Thus, we have deemed the set of 32 items suitable enough for the EFA.

5.3. Extraction of Factors and Processing

We have defined to stop extracting factors when the reproduced correlations matrix almost had elements <.1 only (absolute value) as it means that the actual model has a fit good enough with the original values [50, 51]. The RMSEA (Root Mean Square Error of Approximation) value has also been computed as further index of goodness of fit, values <=.05 are acceptable [52, 53]. Factors have been extracted with Maximum Likelihood method.

The process started by extracting 4 factors and ended with 6 factors since the reproduced correlations matrix related to 6 factors had 99.39% of elements <.1 (absolute value), with a RMSEA index of .031. The goodness of fit of solutions with 4, 5, 6 factors is summarized in Table 2.

Table 2. The percentages of residuals in the reproduced correlations matrix and the RMSEA index for each extracted factor amount are shown. On the left column: the number of extracted factors for a specific solution;

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on the central column: the percentage of residuals with value <.1 (absolute value) in the reproduced correlations matrix; on the right column: the RMSEA index of the solution.

Extracted factors	% of residuals <.1 (absolute value)	RMSEA
4	96.37	.049
5	98.79	.038
6	99.39	.031

Different types of rotations have been applied to factors to have a set of possibilities for comparing results and for selecting the most satisfactory one [54]. Factors have been rotated, with orthogonal (Varimax method) and oblique rotations (Direct Oblimin method and Promax method with Kaiser normalization), for making the solution closer to the "simple structure" ([55]) and more interpretable.

For the interpretation of factors, in all the rotated solutions the items have been selected according to the following 4 criteria (Ci):

- C1: (in the end not used) select items with a loading cutoff of .35. Thus, items must have a loading >=.35. This is a simple pragmatic criterion, in the end it has not been used;
- C2: select items with a loading cutoff >=.3 as factor markers and a factor must have at least 3 markers [56]. Whenever possible, in practice more severe cutoff values were used (such as, for example, >=.4 or more);
- C3: select those items so that: absolute value of (item's first maximum loading amongst factors – item's second maximum loading amongst factors)>=.3 [57];
- C4: first apply C3 and then apply C2 to the items resulting from C3. This criterion helps in letting factors emerge with at least 3 factor markers featuring both: a good enough distance of highest loading value from other loading values and a loading cutoff value good enough.

To sum up, 27 solutions have been computed: 3 "initial" solutions (with 4, 5 and 6 extracted factors) x 3 rotations (orthogonal Varimax, oblique Direct Oblimin and Promax methods) x 3 criteria (C2, C3 and C4) for items selection. In some cases, the application of certain criterion Ci caused the exclusion from the solution of one or more extracted factors because not enough items satisfied Ci.

The solutions obtained from the extraction and rotations of 6 factors have been discarded because they presented: some values of communalities >1, one loading value >1 and inconsistent values of the explained variance (initial and after extraction) of 2 factors.

The method for selecting the best solution from the 27 solutions has been: consider the maximum number of factors kept and consider the maximum percentage of cumulated variance (computed on factors kept) and consider the maximum loading cutoff used and, in case of very similar solutions, if possible, prefer the solution with C4. This method has been applied simply by looking at the values scored in the 27 solutions.

According to this method, the best solution is that one with 5 extracted factors and with Promax method for rotation and with items selected with criterion C4; in short, let's call this solution the *winning solution*. The values of loadings of items selected in the winning solution range from .518 to .975; according to the classification reported in [44, 58] such values are classified from (almost) "good" to "excellent".

The summary of the best solutions from 4, 5 and 6 extracted factors is shown in Table 3.

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Table 3. The overview of the best solutions only, for each rotation, is shown. From leftmost column to rightmost column, are shown: the initial number of factors extracted for specific solution; the type of rotation applied to extracted factors; the criterion Ci giving the best items selection for factors; the discarded factors Fi not satisfying the criterion Ci; the number of factors left; the percentage of cumulated explained total variance after rotation (factors left only) and, in parentheses, the initial percentage (all extracted factors); the loading cutoff for the selection of items on factors. The last 4 lines show the solutions with 6 extracted factors: they have been discarded from the analysis because some communalities values were >1, because (the line in red) the loading value of one item was >1 and the explained variance values of 2 factors were inconsistent.

No. of extracted factors	Type of rotation	Criterion (Ci) giving the best result	Discarded factors (Fi)	No. of factors left	Cumulated explained total variance (%) fact. left (all fact.)	Loading cutoff (absolute value)
4	Ortho	C2	-	4	47.37 (54.29)	.463
4	Oblimin	C2	-	4	47.37 (54.29)	.433
4	Promax	C2	-	4	47.37 (54.29)	.459
4	Promax	C4	F4	3	44.67 (49.83)	.501
5	Ortho	C2	F5	4	48.00 (54.29)	.507
5	Oblimin	C2	F4	4	47.59 (53.66)	.403
5	Promax	C2	F5	4	48.00 (54.29)	.544
5	**Promax**	**C4**	**F5**	**4**	**48.00 (54.29)**	**.518**
6	Ortho	C2	F5, F6	4	48.15 (54.29)	.423
6	Oblimin	C2	F1	5	40.56 (23.54)	.386
6	Promax	C2	F6	5	51.16 (58.11)	.373
6	Promax	C4	F5, F6	4	48.15 (54.29)	.594

As stated in [56], the global efficiency (ge) of a solution is defined as:

ge = $(E_1+E_2+\ldots+E_k)/k$, where E_i (i: 1, 2, …, k) is the eigenvalue of the i-th factor and k is the number of extracted factors; ge should be >=2. The winning solution scored ge=3.71 (computed with the 5 factors), that is an acceptable value. Another indicator of the potential usefulness of the solution, proposed by [56, 58], is that the structure matrix of the rotated solution is not composed only by values <.45 (absolute value). The 51% of elements of the structure matrix of the winning solutions are values >=.45, that is an acceptable percentage.

The winning solution has 4 factors (factor 5 has been discarded) and 15 items from the processed set of 32 items and it is the scale of the attitude of people towards social metaverse, shown in Table 4. As derived from the original questionnaire, it is a scale composed by 5-point Likert items ("Strongly disagree", "Disagree", "Neither agree nor disagree", "Agree", "Strongly agree"); the higher the score, the higher the subject's attitude towards the social metaverse.

Table 4. The scale of the attitude of people towards the social metaverse. In the first column the 15 items of the scale, numbered from 1 to 15, are shown. Shown in parentheses: the attitude of the item in relation to social metaverse ("+"=positive, "-"=negative and score must be reversed), the item number in the original questionnaire and the inspiring tag Ti. The other columns show the loadings of the items on the factors (Fi).

Scale item no.	F1 (loading)	F2 (loading)	F3 (loading)	F4 (loading)
1 I think that, in virtual social worlds, doing what I want and sharing my experiences can better my well-being (+) (9) (T6)	.591			
2 If there was something limiting my life, I think I could overcome it by getting immersed in virtual social worlds and attending experiences that I would select myself (+) (11) (T7)	.898			

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3 If I had trouble travelling, being able to meet up anyway with people in virtual social worlds would be consolatory for me (+) (23) (T6)	.838				
4 Doing things in virtual social worlds rather than in reality can be positive (+) (34) (T7)	.518				
5 I am afraid that social relations made by users interacting in virtual social worlds might impoverish people (-) (6) (T7)		.717			
6 I don't like the idea of "being away" from reality around me while immersed in virtual social worlds (-) (17) (T7)		.778			
7 In my opinion the experiences and sharing in virtual social worlds can't be as satisfying as experiences and sharing in real life (-) (19) (T7)		.587			
8 I wouldn't like to wear all the time on the head a display device for getting immersed in virtual social worlds (-) (26) (T7)		.706			
9 In virtual social worlds, I would like to attend public events and situations, such as going to concerts, to cinema, to theater, to club (+) (21) (T4)			.775		
10 I think that attending public entertainment events within virtual social worlds is a good idea because I can have fun and feel at peace (+) (33) (T4)			.710		
11 I'd like to participate in astonishing events within virtual social worlds, like for example attending concerts in between the planets, or going to amusement parks stretching to the horizon, or shopping in ancient Rome (+) (35) (T7)			.642		
12 I think I will use the virtual social worlds (+) (36) (T7)			.544		
13 Doing fitness while immersed in virtual scenarios draws me (+) (1) (T7)				.671	
14 The possibility to play sports and games within virtual social worlds with other people "present" in virtual, is a nice thing (+) (29) (T4)				.800	
15 Playing sports within virtual social worlds is an interesting thing (+) (32) (T4)				.975	

The Cronbach Alpha value of the scale is .855 while the Cronbach Alpha values of the items of the factors are, respectively, Alpha of F1=.748, Alpha of F2=.708, Alpha of F3=.805 and Alpha of F4=.832 ([59, 60]).

5.4. Interpretation of Factors

EFA made factors emerge as latent components underlying the set of items of the questionnaire, each factor groups items together. An interpretation of the factors is here described to identify the groups of items and, thus, the arguments expressed by the scale.

Factor 1 can be identified with: "Making up for real life (well-being, limitations); Virtual as a resource". F1 encompasses aspects related to improving personal well-being by using the metaverse.

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High scores correspond to considering the metaverse as a resource that allows one to overcome personal limitations and difficulties, and to generally improve one's life.

Factor 2 can be identified with: "Comparison with reality, concern / skepticism; Metaverse as a substitute for reality". F2 consists of items that assess thoughts of people on using the metaverse in place of reality. Expressions such as "all the time" or "impoverish people" explore fears or expectations that the metaverse could replace the way we experience social interaction. The items of F2 convey a negative attitude, their scores must be reversed. In this case, high scores (disagreement) indicate a positive view of the metaverse as an option for experiencing interaction differently, while low scores (agreement) correspond to a rejection of the metaverse as a substitution of reality.

Factor 3 can be identified with: "Entertainment in virtual social worlds". F3 includes items related to entertainment, in various forms (e.g., amusement parks, concerts, general entertainment). High scores correspond to a positive propensity to use the social metaverse for these purposes, while low scores correspond to rejection of the social metaverse.

Factor 4 can be identified with: "Sports and games in virtual social worlds". F4 includes items related to playing sports and games immersed in virtual social worlds, also by sharing these experiences with other people. High scores correspond to a positive propensity to use the social metaverse for these purposes, while low scores correspond to a rejection of them.

5.5. Scoring

The scale should be administered to subjects possibly by randomizing items to prevent potential communication between subjects, to reduce order effects and to minimize systematic response bias. As previously stated, the items 5, 6, 7, 8 represent a negative attitude towards metaverse, thus the related answers must be reversed before computing the overall score.

The interpretation of results falls in the topic of scoring Likert scale-based questionnaires. Given the fact that the Likert scale is an ordinal scale and that it is unknown, for their own nature, whether points are equally spaced on the scale or not, there are different approaches in scoring and interpreting results of Likert scales ([61-63]).

In the case of our scale, we can compute some reference values. Let's assign responses a score from 1 to 5, from the most negative to the most positive attitude towards what is sentenced in the specific item: "Strongly disagree"=1, "Disagree"=2, "Neither agree nor disagree"=3, "Agree"=4, "Strongly agree"=5 (the scores of items expressing negative attitudes towards what is sentenced in the specific item must be reversed). The possible score ranges of factors, such as [min_score, max_score] closed intervals, are the following: F1, F2 and F3 range in [4, 20] while F4 range in [3, 15]. The total score of a subject is the sum of scores of all the answers on the scale. The minimum total score of the scale is 15, the maximum total score of the scale is 75. These values start from 15: for better readability purposes only, by subtracting the minimum value of 15 from the scores, the score interval [15, 75] is rigidly translated backwards and is transformed into [0, 60], starting from 0 as minimum value. High scores mean that the subject has a considerable positive attitude towards social metaverse features, while low scores mean that the subject has a considerable negative attitude towards social metaverse features. For example (using the translated score values), total scores <= 15 (that is 25% of maximum total score) express just a negative attitude towards social metaverse; on the other hand, total scores >= 45 (that is 75% of maximum total score) express just a positive attitude.

6. Considerations

Some considerations can be made about the results and the limitations of the work. The limitations of the subjects to a specific age range should be left out, given that at present time the use of internet and social media are widely spread into society; instead, if the case, filtering should be applied on the raw data.

The factors of the scale are composed of items grounded on tags T4, T6, T7 (shown in Table 1). More than one half of the contents of the scale is shaped according to main arguments of Meta, represented by the tag T7 ("Living life in the metaverse") and inspiring 9 items of the scale. Tag T7 is

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present in all the factors, as a sort of foundation; this makes sense because, on one hand, it represents the most frequent concept of social metaverse of Meta (as mentioned in Paragraph 3) and, on the other hand, because it represents the essence of social metaverse itself. It seems that the specific "flavour" of each factor is shaped by the other tag(s) occurring in the factor itself. At the same time, latent dimensions of the social metaverse may exist that are not captured by our scale, since the items were generated solely from the tags identified from Meta, suggesting that other relevant facets may remain unmeasured.

We guess that subjects have been particularly sensible to the idea of, let's say, transferring various activities into virtual worlds of social metaverse. In particular, it seems that the concepts related to the metaverse as an opportunity to eliminate barriers and limitations derive from the tags T6 ("Tearing down the boundaries") and T7 and are reflected in F1 (inspired by T6 and T7).

On the other hand, subjects have been also sensible to the idea of worries and skepticism in relation to the essence of activities played in the social metaverse; it seems that this derives from tag T7 and is reflected in F2 (completely inspired by T7).

The opportunity of doing activities related to, in general, sports and entertainment emerged as a sensible topic; this can be considered as deriving from tag T4 ("Doing activities of daily living") and is reflected in F3 and F4 (both inspired by T4 and T7).

In the surveys reported in [16-19] (described in Paragraph 2) some multiple choice questions scored relevant percentages in "negative" answers, that are characterized by doubts and worries of negative impact of social metaverse on real life. As a qualitative consideration, in the present study this outcome occurred too by manifesting itself in factor F2 (in Table 4), essentially reflecting the "negative" contents. Similarly, in the administered questionnaire the items of F2 scored relevant percentages in "Agree" and "Strongly agree" answers too, as in [16-19]. As mentioned above, it seems that factor 2 arises from tag T7: the idea of living in the metaverse and replacing real experiences with virtual ones emerges in this factor, albeit in a negative light. Some examples of this are summarized in Table 6.

Table 6. On the left column: just for an example, some questions of previous works that scored a relevant percentage of, in general, doubts or worries of a social metaverse; on the right column: the text of items of factor F2 in the scale, the related percentages of "Agree" and "Strongly agree" answers from administered questionnaire are reported.

Question from literature reporting the selection of a "negative" answer	**Items of F2**
In [16], the question: "Can Metaverse be a world where the digital world is more valuable than the physical world?" (28.6%="Yes", 37.7%="No", 33.6%="Not Sure") has a relevant percentage of "No" (that is a "negative" answer). In [18], the question: "Do you think a Metaverse could create a physical communication gap between humans, and also cause hindrance in physical relationships?" (47.4%="Yes", 14.3%="No", 38.2%="Maybe") has a relevant percentage of "Yes" (that is a "negative" answer).	Item 5 - I am afraid that social relations made by users interacting in virtual social worlds might impoverish people. (Agree 36.4%+Strongly agree 43.5%=79.9%) Item 6 - I don't like the idea of "being away" from reality around me while immersed in virtual social worlds. (Agree 40.8%+Strongly agree 38%=78.8%)

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In [19], the question: "In the Metaverse, you could do many of the things you do now such as socialize with others, play games, watch concerts, and shop for digital and non-digital items such as clothing, home goods, and cars. Which of the following describe your views on Metaverse? -Select all that apply" has a relevant percentage in the answer "Not good as real life"=30% (that is a "negative" answer). Note: all available answers have been not reported, too long list.	Item 7 - In my opinion the experiences and sharing in virtual social worlds can't be as satisfying as experiences and sharing in real life. (Agree 33.7%+Strongly agree 47.8%=81.5%) Item 8 - I wouldn't like to wear all the time on the head a display device for getting immersed in virtual social worlds. (Agree 35.3%+Strongly agree 45.7%=81%)

The presented work has some limitations.

The scale developed in the present work has not been validated yet: this is the next step of the process.

For a more reliable analysis, the sample size could be even larger, given that it just fits with some of the recommendations found in literature (as mentioned in Paragraph 5.1).

Some items of the questionnaire should be rephrased more properly because maybe they present the topic to be inspected in a way that is too explicit and they could unintentionally influence the response and being something close to a rhetorical question (just for example: items 3, 8, 17; see Appendix B). Moreover, the items of questionnaire have been generated as inspired, directly or implicitly, by the features of social metaverse promoted by Meta: in this context, the common theme of the narrative of Meta is that the social metaverse is a beautiful place where people can do what they want the way they want; thus, the items risk to express the same topic just with different facets. The above aspects can influence the overall results; in fact, the percentage of cumulated explained total variance (of winning solution) is 54.29% and, after the exclusion of 1 factor, its value is 48.00% (Paragraph 5.3, Table 3) and it should be higher. Future works should aim to broaden the conceptual base of the scale by including items inspired by alternative sources beyond Meta's official discourse, such as user-generated content. This would help to capture a wider range of meanings and experiences related to social interaction in virtual environments.

7. Conclusions

A scale for assessing (positive/negative) attitude of people towards a social metaverse featuring the properties advertised by Meta has been developed; this has been basically motivated by the potential perspective of future social relations in virtual reality worlds and by the lack of investigations specifically tailored on this topic. A questionnaire inspired by such properties has been administered to a sample of subjects then, after the EFA, the scale composed of 15 items grouped in 4 factors has been shaped. This scale is a tool proposed for assessing what is the position of people, in terms of attitude towards social metaverse. While, on one hand, information and communication technologies (ICT) applications and solutions grow at huge speed and are pushed into a society continuously updating its ICT skills, on the other hand we propose that the opinion of people, the attitude of people should be analyzed. The purpose of such a process could be, for example, to enhance the awareness of future digital social relations; a good awareness enables responsible use that may help people to properly move in a society more and more digitalized and virtualized.

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Conflicts of Interest: The authors declare no conflicts of interest.

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Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee of National Research Council, Italy, (internal project code: "PMS") on December 18, 2024, Record Number 0501501.

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

Appendix A

The following search string has been used for search S1NEW in Web of Science:

TI = ((people OR citizen* OR user* OR "end user" OR "end users" OR society OR mainstream OR compan* OR audience) AND ("virtual reality" OR metaverse OR "meta" OR "immersive technology" OR "immersive technologies" OR "virtual world" OR "virtual worlds" OR "VR world" OR "VR worlds" OR HMD OR "head mounted display") AND ("don't want" OR "dont want" OR "do not want" OR "want it" OR want* OR deal* OR apprec* OR curio* OR expectation* OR accept* OR interest* OR enjoy* OR engage* OR involve* OR participat* OR future)) NOT TI = "meta-analysis" NOT TI ="meta-analysis" NOT TI = metaanalysis NOT TI = "meta analyses" NOT TI = "metaanalyses" NOT TI = metaanalyses NOT TI = "meta review" NOT TI = "meta-review" NOT TI = metareview

The following search string has been used for search S1NEW in Scopus:

TITLE ((people OR citizen* OR user* OR "end user*" OR society OR mainstream OR compan* OR audience) AND ("virtual reality" OR metaverse OR "meta" OR "immersive technolog*" OR "virtual world*" OR "VR world*" OR hmd OR "head mounted display") AND ("don't want" OR "dont want" OR "do not want" OR "want it" OR want* OR apprec* OR curio* OR expectation* OR accept* OR interest* OR enjoy* OR engage* OR involve* OR participat* OR future) AND NOT "meta analys*" AND NOT "meta-analys*" AND NOT metaanalys* AND NOT "meta review" AND NOT "meta-review" AND NOT metareview) AND PUBYEAR > 2022

The following search string has been used for search S2NEW in Web of Science:

TI = (metaverse AND (issue* OR problem* OR ethic* OR concern* OR substitut* OR future OR challeng* OR insight* OR alternat* OR roadmap* OR opportunit* OR possibilit* OR "3D virtual world" OR "3D virtual wolds" OR moral* OR achiev* OR dawn OR horizon* OR existence* OR realm* OR realit* OR social* OR societ* OR good OR avatar* OR behaviour* OR behavior* OR extens* OR extend* OR human* OR man OR world* OR health* OR mental* OR mind*))

The following search string has been used for search S2NEW in Scopus:

TITLE (metaverse AND (issue* OR problem* OR ethic* OR concern* OR substitut* OR future OR challeng* OR insight* OR alternat* OR roadmap* OR opportunit* OR possibilit* OR "3D virtual world*" OR moral* OR achiev* OR dawn OR horizon* OR existence* OR realm* OR realit* OR social* OR societ* OR good OR avatar* OR behaviour* OR behavior* OR extens* OR extend* OR human* OR man OR world* OR health* OR mental* OR mind*)) AND PUBYEAR > 2023

Appendix B

In this appendix the administered questionnaire both in English and in Italian language are shown.

The attitude of the item in relation to social metaverse ("+"=positive, "-"=negative) and the inspiring tag Ti are shown in parentheses (the tags are reported in Table 1). The Italian language version is in parentheses and with *Italics style*, below each item.

1 Doing fitness while immersed in virtual scenarios draws me (+) (T7)
(Mi attira l'idea di fare fitness mentre sono immerso in scenari virtuali)

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2 Rather than facing a trip (maybe long and expensive) to meet up with somebody, I prefer to meet somebody within virtual social worlds without moving from home (+) (T6)
(Piuttosto che affrontare un viaggio (magari lungo e costoso) per incontrarmi con qualcuno, preferirei incontrarlo nei mondi social virtuali senza muovermi da casa)

3 In my opinion, doing and sharing experiences while immersed in virtual social worlds would not be something better than reality (-) (T6)
(Secondo me, fare e condividere le esperienze immersi nei mondi social virtuali non sarebbe un qualcosa di migliore della realtà)

4 In my opinion, experiences within virtual social worlds, even in company of other people, could be an alternative to experiences of reality (+) (T4)
(Secondo me, le esperienze all'interno dei mondi social virtuali, anche in compagnia di altre persone, potrebbero essere una alternativa alle esperienze della realtà)

5 The immersion in virtual social worlds offers many possibilities: in my opinion, it risks making reality "unnecessary" (-) (T7)
(Immergendosi nei mondi social virtuali si hanno moltissime possibilità: secondo me questo rischia di rendere "superflua" la realtà)

6 I am afraid that social relations made by users interacting in virtual social worlds might impoverish people (-) (T7)
(Temo che una socialità fatta da utenti che interagiscono immersi in mondi social virtuali possa impoverire le persone)

7 The idea of meeting up with my friends within the virtual social worlds doesn't mean a thing to me (-) (T5)
(L'idea di trovarmi con i miei amici all'interno di mondi social virtuali non mi dice gran che)

8 I think that exploring virtual, imaginary and fantasy social worlds makes little sense (-) (T6)
(Penso che abbia poco senso esplorare mondi social virtuali, immaginari e di fantasia)

9 I think that, in virtual social worlds, doing what I want and sharing my experiences can better my well-being (+) (T6)
(Penso che, nei mondi social virtuali, fare quello che voglio e condividere le mie esperienze possa migliorare il mio star bene)

10 The thought that situations I desire can be realized within virtual social worlds cheers me up (+) (T6)
(Pensare che nei mondi social virtuali si possano creare le situazioni che io desidero, mi rallegra)

11 If there was something limiting my life, I think I could overcome it by getting immersed in virtual social worlds and attending experiences that I would select myself (+) (T7)
(Se ci fosse qualcosa che limitasse la mia vita, credo che potrei superarla immergendomi nei mondi social virtuali e partecipando alle esperienze che sceglierei io).

12 The idea of having experiences with my friends in virtual social worlds leaves me indifferent (-) (T5)
(L'idea di fare esperienze con i miei amici nei mondi social virtuali mi lascia indifferente)

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13 I think that it is nice to have experiences with my relatives within virtual social worlds, instead of meeting up really (+) (T5)
(Penso che fare esperienze insieme ai miei familiari all'interno di mondi social virtuali invece che incontrarsi realmente sia una cosa bella)

14 A future where we meet within virtual social worlds worries me (-) (T7)
(Un futuro dove ci si incontra all'interno di mondi social virtuali mi inquieta)

15 I think that I could spend less time on certain things in real life and, instead, do them while immersed in virtual social worlds (+) (T4)
(Penso che potrei spendere meno tempo per certe cose nella vita reale e invece farle stando immerso nei mondi social virtuali)

16 I like more meeting up and having experiences with people in reality rather than in virtual social worlds (-) (T5)
(Preferisco incontrare e fare esperienze con le persone nella realtà che nei mondi social virtuali)

17 I don't like the idea of "being away" from reality around me while immersed in virtual social worlds (-) (T7)
(L'idea di "essere assente" dalla realtà intorno a me mentre sono immerso nei mondi social virtuali non mi piace)

18 The students could attend classes by getting immersed in a virtual social world rather than being at school: I don't like this scenario (-) (T7)
(Gli studenti potrebbero stare immersi a lezione in un mondo social virtuale invece che stare a scuola: è uno scenario che non mi piace)

19 In my opinion the experiences and sharing in virtual social worlds can't be as satisfying as experiences and sharing in real life (-) (T7)
(Secondo me le esperienze e le condivisioni fatte nei mondi social virtuali non potranno comunque essere soddisfacenti come quelle della realtà)

20 The idea of meeting up with my relatives in virtual social worlds interests me a great deal (+) (T5)
(Mi interessa l'idea di incontrarmi con i miei familiari nei mondi social virtuali)

21 In virtual social worlds, I would like to attend public events and situations, such as going to concerts, to cinema, to theater, to club (+) (T4)
(Mi piacerebbe partecipare nei mondi social virtuali ad eventi e situazioni pubbliche, come andare a concerti, al cinema, a teatro, in un locale)

22 In my opinion it is better to meet up with people within virtual social worlds directly, rather than having to move on purpose to see each other (+) (T6)
(Secondo me è meglio incontrarsi con la gente direttamente all'interno di mondi social virtuali piuttosto che doversi spostare apposta per vedersi)

23 If I had trouble travelling, being able to meet up anyway with people in virtual social worlds would be consolatory for me (+) (T6)
(Se avessi difficoltà a viaggiare, per me sarebbe una consolazione potermi comunque incontrare con le persone nei mondi social virtuali)

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24 In my opinion, the possibility of working while immersed in a virtual office and of attending meetings with people in customized virtual environments is interesting (+) (T7)
(La possibilità di lavorare stando immerso in un ufficio virtuale e di fare riunioni con altre persone in scenari virtuali personalizzati secondo me è interessante)

25 In the virtual social worlds there are many occasions of awesome experiences, but I don't think that this can better the life of people (-) (T7)
(Nei mondi social virtuali ci sono tantissime occasioni di esperienze incredibili, però non credo che questo possa migliorare la vita della gente)

26 I wouldn't like to wear all the time on the head a display device for getting immersed in virtual social worlds (-) (T7)
(Indossare in testa tutto il tempo un visore per stare immerso nei mondi social virtuali non mi andrebbe bene)

27 In my opinion, frequenting virtual social worlds can better life (+) (T6)
(Secondo me frequentare mondi social virtuali può migliorare la vita)
28 I deem it positive to be able to meet up easily with other people within virtual social worlds for the purpose of activities, meetings or work (+) (T6)
(Ritengo positivo poter incontrare facilmente altre persone in mondi social virtuali per attività, incontri o lavoro)

29 The possibility to play sports and games within virtual social worlds with other people "present" in virtual, is a nice thing (+) (T4)
(La possibilità di fare sport e giochi nei mondi social virtuali insieme ad altre persone "presenti" in virtuale, è una cosa bella)

30 I would be fine spending, during the week, 4 - 10 hours immersed in virtual social worlds (+) (T7)
(Mi andrebbe bene, durante la settimana, passare 4 - 10 ore immerso nei mondi social virtuali)

31 Frequenting, exploring virtual social places created by users are pointless things (-) (T6)
(Frequentare, esplorare luoghi social virtuali creati dagli utenti è una cosa con poco senso)

32 Playing sports within virtual social worlds is an interesting thing (+) (T4)
(Fare sport all'interno dei mondi social virtuali è una cosa interessante)

33 I think that attending public entertainment events within virtual social worlds is a good idea because I can have fun and feel at peace (+) (T4)
(Penso che andare ad eventi pubblici di intrattenimento all'interno dei mondi social virtuali sia una buona idea perchè mi potrei divertire e stare sereno)

34 Doing things in virtual social worlds rather than in reality can be positive (+) (T7)
(Fare le cose nei mondi social virtuali invece che nella realtà può essere positivo)

35 I'd like to participate in astonishing events within virtual social worlds, like for example attending concerts in between the planets, or going to amusement parks stretching to the horizon, or shopping in ancient Rome (+) (T7)
(Nei mondi social virtuali mi piacerebbe partecipare ad eventi stupefacenti, per esempio come andare a concerti in mezzo ai pianeti o in luna park giganteschi fino all'orizzonte, oppure fare shopping nell'antica Roma)

36 I think I will use the virtual social worlds (+) (T7)
(Credo che userò i mondi social virtuali)

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37 If there was something of my appearance I did not like, I don't think that participating in virtual social worlds with a different appearance would make me feel better (-) (T6)
(Se ci fosse qualcosa che non mi va del mio aspetto, non penso che partecipare ai mondi social virtuali apparendo con un altro aspetto mi farebbe sentire meglio)

38 The possibility to customize my appearance in virtual social worlds leaves me indifferent (-) (T6)
(La possibilità di personalizzare la mia apparenza all'interno dei mondi social virtuali mi lascia indifferente)

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