The life of COVID-19 mask memes:
A diachronic study of the pandemic memescape

La vida de los memes de mascarillas del COVID-19:
Un estudio diacrónico del panorama memético durante la pandemia

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ABSTRACT

Taking as its point of departure a fine-tuned definition of an Internet meme (vis-à-vis a memetic construct), this paper reports the findings of the first diachronic study of memes, the focus being on mask memes on the vast COVID-19 mask memescape evolving in the wake of the pandemic, relative to the changing socio-political situation. The study capitalises on a diachronic corpus of user-tagged COVID-19 mask memes (posted online from January 2020 to January 2021) collected from Google through a Python script. Based on a grounded-theory approach, ten memetic categories (clustered into four groups) are extracted and examined through a multimodal discourse analytic lens. The diachronic quantitative analysis shows that the memetic constructs, inspired by the current socio-political situation/events and facilitated by the socio-political context (e.g. going into lockdown), seem to persist, albeit with varied intensity, for the best part of the year, with many individual memes going viral. Memes' and memetic constructs' long lifespan is indicative of users' primary goal, which is to share interesting and/or humorous (not always newly minted or relevant) items for the sake of fun, regardless of the memes' nature (i.e. autotelic humour for its own sake or users' commentaries on the surrounding reality).

RESUMEN

Tomando como punto de partida una definición precisa de un meme de Internet (frente a un constructo memético), este artículo pretende compartir los resultados obtenidos del primer estudio diacrónico sobre memes, centrado específicamente en los memes de mascarillas en el amplio panorama de memes surgido a raíz de la pandemia del COVID-19, asociado a la cambiante situación sociopolítica. El estudio utiliza un corpus diacrónico de memes con mascarillas para el COVID-19 etiquetados por usuarios (publicados en Internet desde enero de 2020 hasta enero de 2021) extraídos de Google mediante un script de Python. Sobre la base de un enfoque de teoría fundamentada, se extraen y examinan diez categorías meméticas (divididas en cuatro grupos) a través de una lente analítica de discurso multimodal. El análisis cuantitativo diacrónico muestra que los constructos meméticos, inspirados por la situación/acontecimientos sociopolíticos actuales y facilitados por el contexto sociopolítico (por ejemplo, el confinamiento), parecen persistir, aunque con intensidad variada, durante la mayor parte del año, lo que permitió que muchos memes se volvieran virales. La longevidad de los memes y los constructos meméticos es indicativa del objetivo principal de los usuarios, que es compartir elementos interesantes y/o humorísticos (no siempre nuevos o relevantes) por diversión, independientemente de la naturaleza de los memes (es decir, humor autotélico por sí mismo o comentarios de los usuarios sobre la realidad circundante).

KEYWORDS | PALABRAS CLAVE

COVID-19 mask, diachronic corpus, meme, memetic construct, humour, viral.
Marcarillas COVID-19, corpus diacrónico, meme, constructo memético, humor, viral.

1. Introduction

1.1. Background and purpose of this study

Previous research has shown amply that humorous Internet memes can serve as users' responses to, and commentaries on, the current socio-political or socio-cultural facts, with COVID-19 being no exception. The COVID-19 pandemic has inspired a plethora of relief-giving (Bischetti et al., 2021) online humour. In turn, this has given rise to a flurry of research that, with very few exceptions (Murru & Vicari, 2021; Dynel, 2021), addresses mainly the recurring topics of memes (Lemish & Elias, 2020; Aslan, 2021; de-Saint-Laurent et al., 2021; Norström & Sarna, 2021). This paper contributes to the COVID-19 humour research, based on an automatically generated corpus. Rather than analyse topics, this contribution answers a twofold research question: it distils the categories of the memes in the light of their form, content and stance (Shifman, 2013) and, most importantly, it examines these categories diachronically. Such a diachronic approach does not seem to have been adopted in meme research so far, while online humour (taken as a whole) has been subject to diachronic analysis only intermittently (Demjén, 2018; Archakis & Tsakona, 2021).

This study zooms in on COVID-19 mask memes, a salient and socially relevant COVID-19 topic (besides quarantine and lockdown), circulated from January 2020 to January 2021, the time which brought the first shocking news, numerous controversies and diverse opinions about mask-wearing (unlike other counter-measures before the arrival of vaccines: social distancing and hand hygiene).

This project is premised on the assumption that the memescape that addresses a current and "hot" topic, such as that of COVID-19 mask memes, will respond swiftly to the changes in socio-cultural and political arenas. Based on the assumption that memes reflect the current events (Ross & Rivers, 2017; Dynel & Poppi, 2021; Norström & Sarna, 2021), the central hypothesis is that COVID-19 mask memes should vary across the months, emerging in the wake of the socio-political developments concerning the pandemic and its effects only to fall into oblivion when the memes' novelty has worn off, or when the specific issues have become irrelevant. The examination of the automatically generated corpus, in qualitative and quantitative terms, yields interesting conclusions about the circulation of not only COVID-19 mask memes, but also memes in general. First, the definition of an (Internet) meme is fine-tuned to better account for individual items and memetic virality.

1.2. Memes

According to the original biology-rooted definition proposed long before the digital age, a "meme" is a cultural unit, a piece of cultural knowledge, that infects individual minds through copying or imitation; thereby, it proliferates among individuals and across societies through replication, potentially undergoing necessary mutation, very much like the "selfish" gene (Dawkins, 1976; Blackmore, 1999; Shifman, 2013; Wiggins & Bowers, 2015). Hence, as Wiggins (2019) summarises, the Dawkinsian meme is an idea that spreads virally (originally outside of the Internet and contemporarily via the Internet) without any discernible modification or remixing. However, this idea of a change/remix is a crucial definitional component of an "Internet meme", which is how it is distinguished from a viral one. The latter snowballs across online platforms in an unchanged form (Shifman, 2013; Wiggins, 2019) and may serve as the basis for an emergent meme (Shifman, 2013).

Consequently, the key difference between the two notions is variability; "whereas the viral comprises a single cultural unit (such as a video, photo, or joke) that propagates in many copies, an Internet meme is always a collection of texts" (Shifman, 2013: 56). The pending queries are how similar these "texts" (or rather, multimodal, digital items) need to be and how this similarity can manifest itself in order for the items to constitute a meme.

Based on Shifman's (2013: 7) proposal, the "texts" that form "a meme" are "a group of digital items sharing common characteristics of content, form, and/or stance", which allows for much leeway in terms of what qualifies as an item belonging in a meme. Thus, Shifman's (2013) conceptualisation presents a meme as being constituted by numerous digital items taken together, which is often misquoted and misunderstood. This brings the discussion to the problem of the polysemy of the term "meme", which Shifman's definition skilfully straddles.

A meta-analysis of the ample communication and socio-cultural research on Internet memes leads to a conclusion that there seem to exist two markedly different approaches to this notion, with many works making use of both senses without actually recognising the polysemy. On the one hand, in line with the Dawkinsian conceptualisation, an Internet meme is conceived as a viral idea or a cultural item that gets replicated in various online instantiations necessarily through mutation and remixing (Mielczarek, 2018; Wiggins, 2019). In this sense, memes are thought to be viral (Wiggins, 2019) in line with Dawkins's thought even if, at the same time, they should not be mistaken for digital items known as "virals". On the other hand, presumably, a more popular definition (which is in line with its folk understanding) presents an Internet meme as the very instantiation of a viral idea, namely as a multimodal digital item, typically humorous and "circulated, imitated, and/or transformed via the Internet by many users" (Shifman, 2013: 8-41). Overall, memetic productivity and creativity are the epitome of the social media culture labelled "remix" (Lessig, 2008) or "convergence" (Jenkins, 2006). Incidentally, on platforms dedicated to meme circulation, novelty and creativity are the central goals, with users earning their kudos by submitting items that are well received (e.g. awarded or upvoted) by other users.

In order to avoid confusing different understandings of what an "Internet meme", or just a "meme" (taken by default in studies on online communication), is and conflating virals with memes, a distinction is drawn between a "meme" and a "memetic construct". A meme is thus understood here as each individual multimodal instantiation of a memetic construct that, in turn, coincides with the Dawkinsian meme, that is the viral idea manifest in different iterations. A memetic construct that echoes across specific memes may concern content, form or stance; it may materialise, for instance, as an ideological meaning or a memetic template endowed with an inherent interpretation to be merged with the message carried by whatever is superimposed on it.

While a memetic construct may take up a stable position on memescape, specific memes typically arise only to "fall into virtual oblivion, outdone by newly minted iterations" (Mielczarek, 2018: 71). Many authors (Knobel & Lankshear, 2007; Shifman, 2013) have noted that memetic constructs are elusive, ephemeral entities showing a transient nature: they appear all of a sudden, generate some interest and quickly become a thing of the past. However, some memes and memetic constructs may resurface with old or new meanings in line with the basic premise of remix culture (Mielczarek, 2018). Moreover, as this study indicates, individual memes may actually go viral, being reposted in the same form across platforms.

2. Materials and methods

A Python script was built to collect randomised diachronic data from Google Images through a newly installed browser, Selenium. In the targeted search done on 28th February 2021, two queries were applied in English: "'COVID-19 mask' + 'meme'" and "'coronavirus mask' + 'meme'" with a data range parameter (after: YYYY-MM-DD before: YYYY-MM-DD) for each of the targeted months in order to retrieve items posted online from January 2020 to January 2021. Given the recurrence of the same items in the adjacent months (due to immediate repostings), memes posted every second month were ultimately selected as the representative dataset, capable of showing changes (January, March, May, July, September, November and January). Also, April was added to the set, given that many countries were on lockdown, at least for some part of the month, which is when meme productivity was expected to be the highest. Thanks to the new method of data collection (Dynel & Poppi, 2021), the automatically collated items bearing the user-generated tags in English constitute a randomised sample of the memescape, without favouring any platforms, which might have their own agendas, and without being determined by user engagement. Most importantly, this method minimises personal bias present at the stage of data collection whenever researchers compile humorous data manually, which duly reflect scholars' or their informants' individual preferences for some types of humour over others.

Working with this original corpus (n=3,497) divided into months, the research assistant subsequently manually removed merchandise advertisements and unequivocally unrelated images (falsely tagged). In another step, we deleted collages of various previously encountered memes and duplicates recurring within one month, both of which testify to specific memes going viral and receiving high user engagement. Thus, the main dataset (n=1,008), amenable to manual analysis, shows the following distribution of memes

across the eight months: January (n=102), March (n=131), April (n=203), May (n=112), July (n=99), September (n=168), November (n=180), and January 2021 (n=141).

The data were examined following a *grounded-theory* approach so that the categories would emerge from the corpus, dictated by the masks' roles in the memes. This also meant taking account of the memes' form, content and stance (Shifman, 2013). In general terms, the data were approached through a multimodal discourse analytic lens (Machin & Mayr, 2012). Hence, each meme was regarded as comprising multiple semiotic resources (Baldry & Thibault, 2006), with multiple visual and verbal modalities being relevant (e.g. the camera angle and distance, pose and gaze, and components' positioning).

Following an iterative procedure, the author identified ten mutually exclusive meme categories. The data were ultimately annotated through manual double-coding done by the author and her research assistant, who was instructed about the ten categories. The initial result of the double annotation was followed by a discussion of the subtle multimodal components so that agreement could be reached on each item with two different qualifications (n=71). Ultimately, all the memes in the corpus were divided into the ten categories, which proved the saturation of description. These ten categories fall into four groups (except for two broad ones, coinciding with specific memetic constructs), as presented in Section 4.

3. Analysis and findings

3.1. Qualitative findings

The corpus, comprised of eight monthly sub-corpora, is divided into ten mutually exclusive categories clustered into four groups centred around: 1. The type of mask worn by a subject in the image ("reports", "parodies", "pranks" and "spoofs"), 2. Evaluation of mask-wearing ("corrective", "chastising" and "skeptical"), 3. Masks being commonplace ("sign of the times" or "pre-COVID 19 times"), and 4. Masks as tools (not the conceptual focus) facilitating memetic humour construction ("props" or "background").

Figure 1. Reports (A-C), pranks/spoofs (D and E), and parodies (F and G)
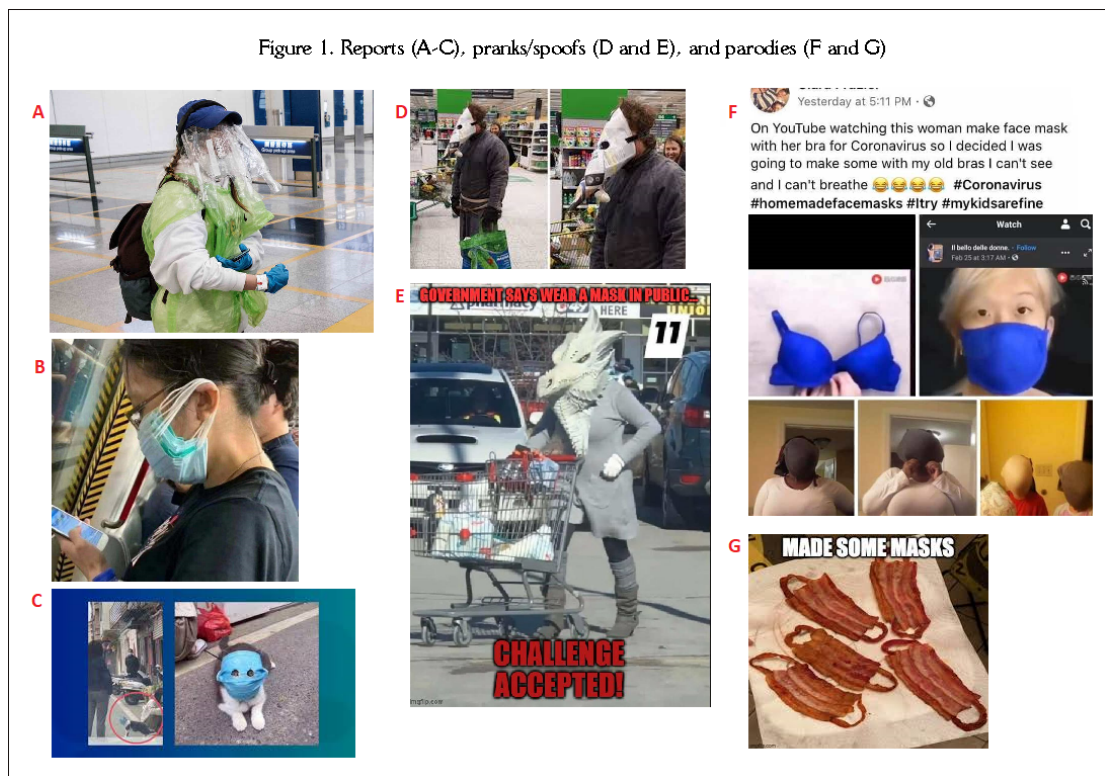
As shown in Dynel (2021), many COVID-19 mask memes involve subjects, or what Kress and van-Leeuwen (2006) call "represented participants", that are typically people but also animals shown in the images by "interactive participants", i.e. the new media users who (re)post the memetic content online. Sometimes, the represented participant may coincide with the interactive participant, as is the case with selfies posted online for the first time, or the two may be collaborators. By contrast, represented and interactive participants may be strangers, the former being oblivious to their becoming the foci of memes, as is the case with the category dubbed "reports" (Figures 1A-1C).

Reports concern the memetic construct of masks and other items of clothing sincerely worn by subjects for protection against COVID-19. These subjects are typically captured in photographs unknowingly in public spaces by observers who find the protective measures so bizarre as to be amusing. These include make-shift items, such as the peculiar composition of plastic (Figure 1A), and other uncanny manifestations of protection, such as the multiple surgical masks worn simultaneously (Figure 1B) or the mask on the pet's head (Figure 1C). These photographs seem to have been taken at the beginning of the pandemic (as evidenced by the month of the original postings), when informational confusion about the new virus and the dearth of protective measures caused panic-stricken citizens to go to any lengths to avoid the virus. The strangely dressed humans and animals can be said to have unintentionally become the source of amusement, with the humour being the intended outcome of the meme (re)posters' online practices.


Figure 2. Sign of the times (A-C) and pre-COVID-19 masks (D and E)
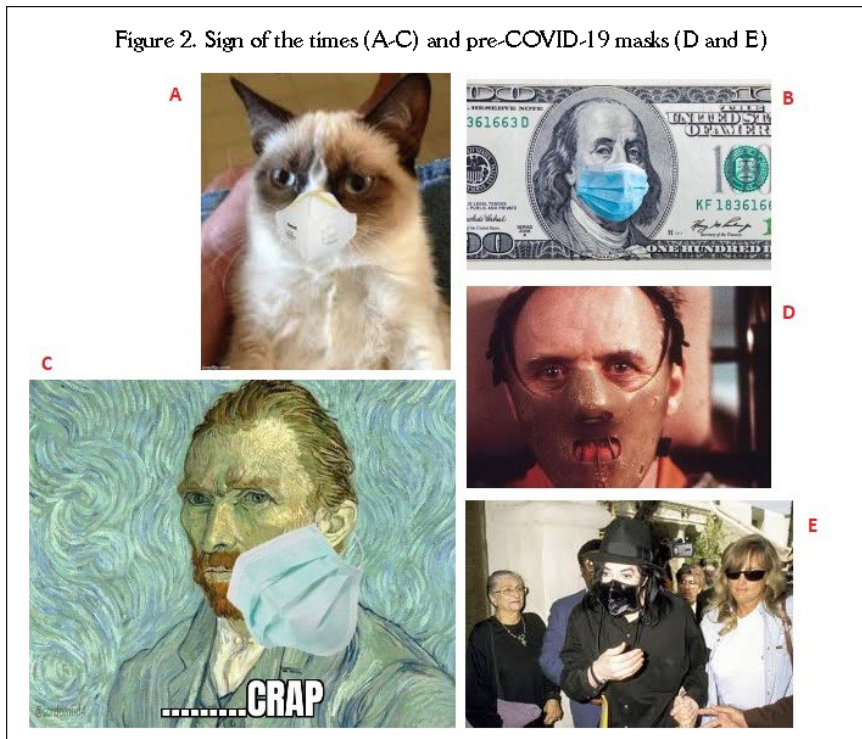
The "reports" category can be formally juxtaposed with memes also centred on subjects with peculiar masks or full attire, albeit worn (or only presented as if worn) in public spaces mainly for the sake of fun rather than protection, such as the newspaper beak (1D) or the dragon's head (1E). This category comprises two memetic constructs, "pranks" and "spoofs" (Dynel, 2021), which may sometimes be difficult to tell apart in practice, given users' Photoshop skills and lack of contextual evidence (such as the passer-by laughing at the subject in 1D). The label "prank" concerns subjects who mean to amuse other people they encounter in public places, whether or not cognisant of the pictures being taken and their imminent meme status. Spoofs, in turn, involve subjects whose looks are purposefully manipulated with the use of digital technologies, for the sake of only online receivers' fun, with the general idea being to poke fun at a subject's weird protection that they are (allegedly) wearing. Both pranks and spoofs contain an element

of humour-oriented deception concerning the intention behind the mask-wearing and/or the actual act of mask-wearing.

Another related category, mask parodies (Dynel, 2021), is a memetic construct that encompasses images, typically selfies, of subjects at home, exhibiting their newly designed masks, which they clearly have no intention of wearing in public but which are meant to humorously echo creative self-made masks (cf. the reports category). A case in point is the meme in 1F. It reports the unfortunate result of copying the popular advice involving the transformation of a padded bra cup into a mask; the predictable failure is due to the cup size, with the woman's masks being much too big for her and her children. This category also includes images of subject-less masks, such as those carved from bacon (1G). Overall, the three categories of memes rely on peculiar, often creative, masks being a source of humour, either as intended by the subjects, who may coincide with meme producers (pranks/spoofs and parodies), or without this intention (reports). It is also the concept of an ordinary medical mask per se or an otherwise known type of mask that may be a source of humour, as the following two categories illustrate, both relying on cultural references (Figure 2).

The category labelled "sign of the times" shows a salient memetic construct: masks being superimposed on faces known from various cultural artefacts, whether historical or contemporary, such as works of art (e.g. statues or paintings like Van Gogh's self-portrait in 2C), publically known individuals (e.g. Grumpy Cat in 2A), or cultural symbols, such as Benjamin Franklin on the US one-hundred-dollar bill (3B). Such memes play with the idea of the prevalence of protective masks in the COVID-19 times. Sometimes, an additional humorous effect arises when special features of the represented person are considered, as is the case with van Gogh's mutilated ear that would have made it impossible for him to wear a surgeon's mask.

Figure 3. Corrective (A and B), chastising (C and D) and sceptical memes (E and F)
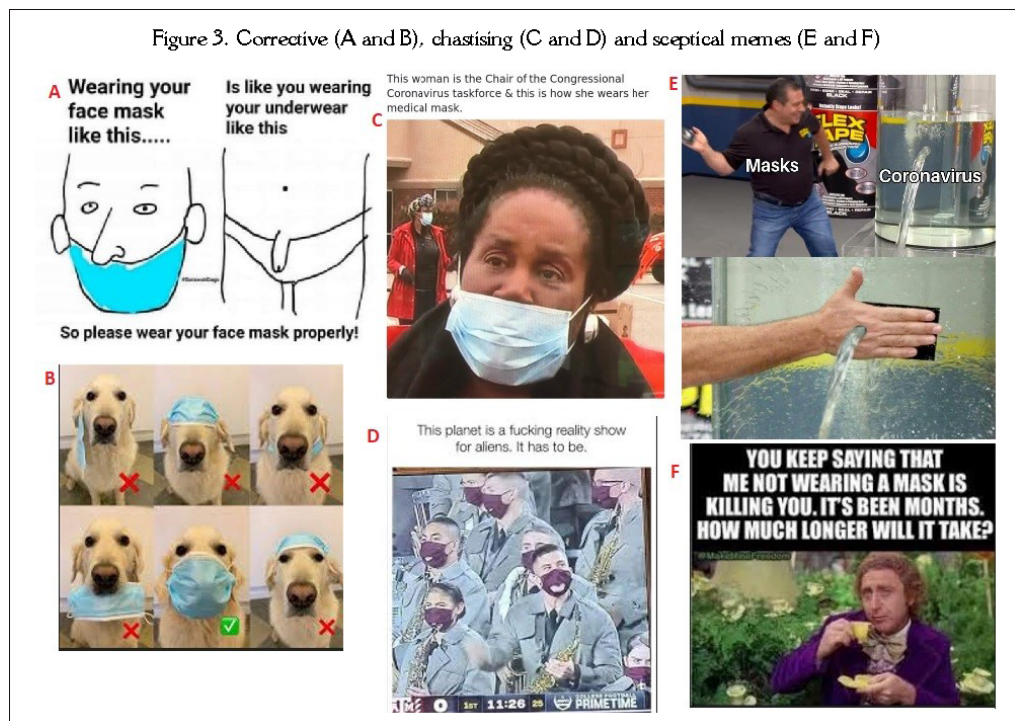
The related category of pre-COVID-19 masks pertains to memes that feature various kinds of masks worn before the COVID-19 era, whether by fictional characters (Hannibal Lecter in 2D) or famous people (Michael Jackson in 2E). This memetic construct indicates that the topic of COVID-19 masks evokes users' memories of pop-culture masks, whether or not used for anti-viral protection. The protective function of masks is the topic of three other meme categories (Figure 3), two of which endorse adequate mask-wearing (3A-3D), whilst the third one questions the need for mask-wearing and its efficiency (3E-3F), collectively

reflecting the long-standing medical, political and legal debates held both on the personal level and in public media. In these memes, it is the topic and stance that determine the memetic construct at hand.

"Corrective" memes present medical rationale supporting the role of masks in limiting the spreading of the virus and offer advice on how masks should be worn properly. This is done, for instance, through the multimodal simile (3A) or the visual representation of the adequate vs inadequate (and sometimes even absurd) mask-wearing practices with the help of a dog (3B). In this vein, the "chastising" category encompasses memes that express a negative evaluation of people wearing face masks wrongly (as in 3C, below the nose, as done by Sheila Jackson Lee, a US politician presented by the meme creator as holding a special function during the Coronavirus crisis in the USA), or wearing masks that cannot possibly guarantee protection (cf. 3D, which shows a photograph of a television screen with a brass orchestra wearing masks with holes allowing the musicians to play but making the masks useless as protective measures). By contrast, memes classified as "skeptical" criticise masks based on the assumption that they do not stop the virus from spreading, as represented through the multimodal metaphor in 3E, as well as indicate some people's imperviousness to the repeated requests that masks be worn for the sake of mutual safety (cf. 3F, which merges a cynical statement with a metaphorical representation of a relaxed attitude).

Overall, the three categories of memes take mask-wearing as the central topic, with users presenting their stances on this issue. These have been isolated from among the memes constituting an eclectic group that relies on masks but does not address the topic of mask-wearing as the central focus and (unlike all the other previous ones) does not evince one memetic construct in the form of a single topic. This group contains a category dubbed "props", which is juxtaposed with the one that merely involves the use of masks as the "background" (Figure 4).

Figure 4. Masks as props (A-E) and background (F and G)
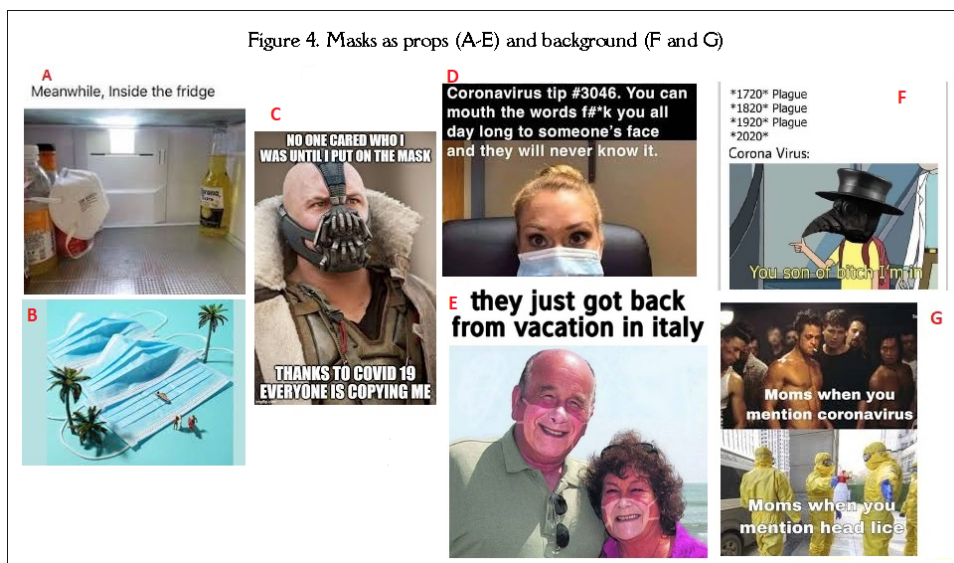
The "props" category is very broad and seems to be closest to memes understood as standard multimodal jokes, whilst the other categories discerned so far appear to be specific to COVID-19 mask memes. This heterogeneous category cannot be broken into any neat subtypes. However, some of the memes that use masks as their joke props can be thought of as humour based on wordplay (cf. the Corona beer inspiring fear in other drinks in the fridge hiding behind a mask in 4A) and visual play (the exotic-holiday beach image involving the use of surgical masks as waves in 4B) without much informative import or stance-taking, whilst referring to COVID-19 masks in one way or another. The point of these memes is just to make light of masks, which serve as joke props in the memes. Other memes in this wide-ranging category take masks as their point of departure to make personal commentaries, as is the case with the meme in 4C. It features a pop-cultural, intertextual reference to Bane (Batman's masked opponent from "The Dark Knight Rises") with a quotation from the film (top) followed by a comment on the COVID-19

reality. Similar to this item, many other memes address the real or potential consequences of people having their faces covered, such as being secretly mean to others with no repercussions (4D) and getting a peculiar sun-tan (4E).

By contrast, albeit tagged "mask memes", some items seem to involve masks only as secondary items helping form the background of memes, rather than constituting their pivots. Such is the case with the plague doctor's mask accompanying the text that addresses the history of plagues occurring every 100 years in 4F. Moreover, memes belonging to this category may not be primarily, or only, about COVID-19 per se, as is the case with the critical meme in 4G that metaphorically juxtaposes unwise mothers' (irrational) means of coping with the coronavirus and lice at schools: an angry rebellion with no protective measures applied (represented by a bare-handed fight scene from "Fight Club") and a counter-action taken in protective gear from head to toe, respectively.

3.2. Quantitative and diachronic findings

The sizes of the monthly corpora of individual memes, with no duplicates included within each month (n=1,008), are indicative of the interest a given category (except for props and background coinciding with a memetic construct) generated among meme posters in the specific months (Figure 5). The colours represent the groups of memes: 1. The type of mask worn by a subject in the image (reds), 2. Evaluation of mask-wearing (greens), 3. Masks being commonplace (blues), and 4. Masks as tools in memetic humour construction (violets).

Figure 5. Distribution of the ten memetic categories from January 2020 to January 2021
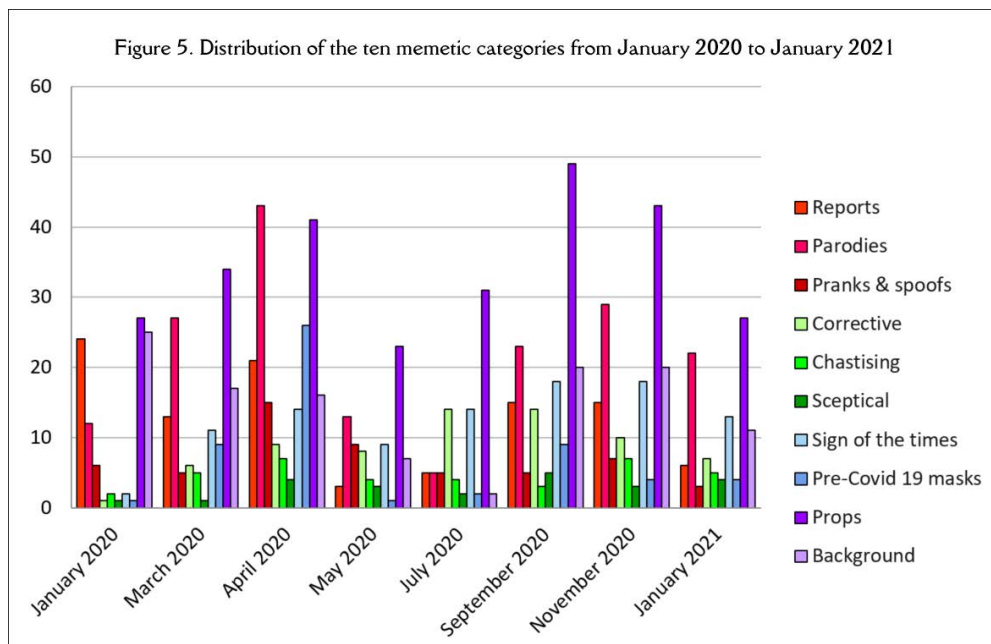
The general quantitative findings emerging from the collected corpus are hardly surprising. As predicted, the most memetically productive month in the corpus is April 2020 (n=203), the month of international lockdown, which is reported to have significantly affected the use of digital media on the whole (Nguyen et al., 2020). The stay-at-home time must have promoted users' social-media memetic productivity concerning the COVID-19 pandemic. By contrast, the smallest number of posts in July (n=99), together with the rather low number in May (n=112), is a natural consequence of nations coming out of lockdown and the holiday season in many countries, when most restrictions were lifted, potentially causing people to spend less time engaged in memetic production online. Therefore, all the categories were in a slump in May and July only to bounce back in September. The second least amply represented month is January 2020 (n=102), the month when the information about the new coronavirus only started pouring in, and the topic could not yet have been of top priority.

It had been expected that "reports" would be the category showing the highest frequency of occurrence in January 2020, which saw the first reports about the virus in China and, soon afterwards, in other Asian countries, as well as about the dearth of medical masks there, with panic caused by the lack of precise medical instruction. At the same time, there was no imminent, palpable threat to the entire globe blocking the humour experience at the expense of the subjects (Bischetti et al., 2021 on the spatial and temporal distance from a tragedy as a factor in the experience of humour).

However, while the "reports" category did achieve its peak in January (n=24), it also had significant representation in March (n=13), April (n=21), September (n=15) and November (n=15). Surprisingly, reports were salient in later months too, often in the form of reposts, potentially testifying to the perceived humorousness of the images showing the desperate people and their self-made protection (on themselves or even their animals) to be made fun of, even at the time when the grave COVID-19 consequences were recognised worldwide.

On the other hand, the categories of parodies, pranks and spoofs enjoyed their greatest popularity in the months following January 2020 and the reports from Asia. Each achieved its peak in April (parodies: n=43, pranks and spoofs: n=15), which is the indication of people wanting to have fun under lockdown. Taken together, parodies (n=174) outnumber pranks and spoofs (n=55), which may have to do with the ease of production.

Presumably, it takes either more courage to go out in a peculiar costume or more luck to see and take a picture of a person in peculiar attire; likewise, one may need more technical skills to convincingly manipulate an image than to take a picture of a self-made mask (whether of their own design or merely copying what someone else has already done) or a selfie in a peculiar mask worn at home. Overall, parodies, pranks and spoofs form the second biggest group in the corpus (n=229), and their presence is marked not only in April (n=58) but also in other months, most notably: November (n=36), March (n=32) and September (n=28).

Similar to parodies, pranks and spoofs, the sign-of-the-times and pre-COVID masks were, in general terms, amply represented across the months, starting in March (when masks began to be commonly used worldwide), altogether constituting the third largest group of memes (n=155). The top four months are April (n=40), September (n=27), November (n=22) and March (n=20). These two categories are also a form of memetic play, based on the simple assumption that masks have become commonplace or that they were widely used and known in the past. At the same time, the exceptionally high number of pre-COVID-19 mask memes in April may be an indication that users were on the lookout for the validation and normalisation of masks, however peculiar the masks they were referring to could be (cf. the mask worn by the fictional serial killer Hannibal Lecter).

Insignificant differences across the months aside (corresponding with each monthly corpus size), the corrective and chastising memes (n=106), as well as the opposite category of sceptical memes (n=23), showed almost an even distribution across the months for the best part of the year following January 2020. This category seems to reflect the long-lasting discussions and controversies around the efficiency of masks as protective measures, as well as the salient cases of media personas wearing their masks inappropriately. Based on the data at hand, it can be hypothesised that meme creators tend to trust the efficiency of masks, with sceptics being in the minority.

"Props" is the category that features most prominently across the months (except for April, when it is slightly superseded by parodies), with the lowest (and yet still significant) count (n=23) in May, and the highest result (n=49) in September. With these scores, it is the largest category (n=275) in the corpus, taking into account even grouped categories (cf. the reds, greens and blues in Figure 5). This is hardly surprising since this is a large category that encompasses numerous memetic constructs. Some diachronic variety can be observed across the months, inspired by, and reflecting the social, cultural, and political context, as observed by users. For example, given the early reports about COVID-19 originating in Wuhan, the first few months of the global pandemic saw memes such as the one in 6A based on an advertisement of masks sent (ironically enough) from Wuhan and human-tested there, as the meme author's highlights indicate.

Figure 6. Examples of masks as props diachronically
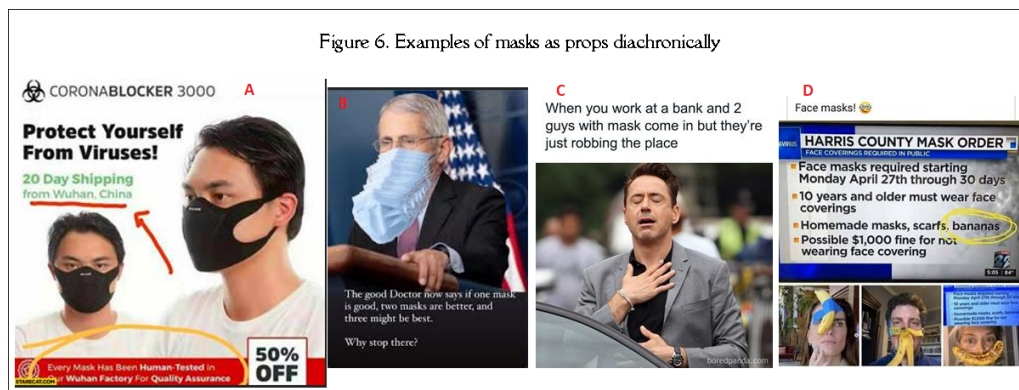
Additionally, the corpora from January and March (the month the pandemic was announced across the world, following the reports of the virus in China and other Asian countries in January, and Italy in February) contain memes about people being scared of getting infected and memes criticising people spreading the virus by travelling, while memes posted in the later months as the pandemic is raging tend to comment on lockdown, quarantine, and absurd governmental decisions, among other things. Moreover, some memes from the props category start appearing after specific events, as is the case with a public recommendation made by Dr Anthony Fauci, the director of the National Institute of Allergy and Infectious Diseases, about the benefits of double-masking, which the 6B meme creator ridicules through a multimodal hyperbole. However, some memes seem to be topically universal in the COVID-19 world, such as the playful meme in 6C that alludes to the pandemic-induced need of mask-wearing as if it is worse than a bank robbery from a bank employee's perspective. Needless to say, memetic constructs may feature in many memes, as is manifest in 6D, which centres on a screenshot of news presenting an information notice that contains a typo ("bananas" vs "bandanas"), inviting humorous activities in response, three of which are shown at the bottom of the meme. Interestingly enough, the bottom-right-hand-corner example must be a repost of an independent meme featuring the same information notice in it.

Finally, the presence of the marginally relevant "background" category in the corpus seems to be the consequence of (over-)tagging that users perform in order to boost the findability of their memes. At the same time, the preponderance of such memes testifies to the user-perceived salience and/or normalised prevalence of masks in the socio-cultural world affected by the COVID-19 pandemic. On a general note, the findings indicate that memes and memetic constructs are not as short-lived as might be expected. Apart from the fact that memetic constructs persist over the months under investigation even if their relevance is limited, individual memes tend to be reposted not only within but also across months, sometimes going viral. Within the corpus, a substantial number of items (n=59) occur in more than one monthly subcorpus, and the most recurrent meme (6C) resurfaces four times across the months.

4. Discussion and conclusions

Addressing the topic of COVID-19 mask memes, this study has contributed new findings to the research on memes on methodological, theoretical and empirical grounds. Having refined the definition of (Internet) memes in order to juxtapose them with the proposed notion of memetic constructs (i.e. Dawkinsian memes) and virals, this paper depicted the results of an empirical investigation of a diachronic corpus of user-tagged memes collected automatically through a Python script and then groomed manually.

With regards to the empirical findings, ten mutually exclusive categories of memes (exhaustive of the dataset) were discerned through a grounded-theory approach, based on the role of the mask and the form, content and stance (Shifman, 2013) with the use of multimodal discourse analysis. Except for two categories (props and background), most of the categories coincide with memetic constructs specific to COVID-19 memes in terms of form and content (reports, parodies, pranks and spoofs, and the sign of the times) or only content (corrective, chastising, sceptical, pre-COVID-19 masks and props). As their content shows, some memes serve the expression of users' genuine beliefs and opinions, albeit presented in a humorous fashion. This concerns especially the corrective, chastising and sceptical categories, as

well as part of props, whereby users endorse or contest health authorities' regulations and governmental decisions or question fellow citizens' behaviour. However, other memes allude to facts in the background but essentially amount to specimens of "autotelic humour", that is humour for its own sake. The latter practically always holds for memetic trends such as parodies, pranks, spoofs, and the sign of the times, which are a clear indication that users just want to have fun by sharing humorous content.

Whether representing autotelic humour or bearing non-humorous content, memes and memetic constructs are inspired by, and hence reflect, socio-political facts, including the very necessity to wear masks, or they may derive from specific events, which is when their birth date can be determined. Thus, the topics of the memes prevalent at different points in time, can give insights into users' perceptions and evaluations of the current surrounding reality. However, memes or memetic constructs sometimes linger much longer, even if their frequencies may differ across the months for reasons that cannot easily be accounted for. As predicted, users' memetic activity seems to be facilitated by the socio-political context, a crucial factor being lockdowns, which promote greater memetic productivity. Nevertheless, this productivity does not always entail creativity.

Contrary to the well-recognised postulate that memes should be distinguished from virals, in tandem with the default assumption that memes are not just reposted but constantly mutate (Shifman 2013; Wiggins, 2019) in line with the central premise of remix culture, the diachronic corpus included numerous repetitions within and across the months. Memes repeating within the same month (deleted from the corpus at the outset as being irrelevant, given the purpose of the study) may be easily explained: having seen an interesting digital item, a user immediately reposts it elsewhere for other social media users to enjoy, regardless of the presupposed creativity principle that governs meme production on dedicated platforms.

What is much more interesting is the same memes being reposted months after they had been posted, when their novelty must have worn off and when they may have lost their socio-cultural relevance. This is the most striking in the case of the "reports" category, found in all the monthly datasets. The early memes poking fun at the panic-stricken (primarily Chinese) people resorting to various home-made protective measures may have been interesting and amusing at the beginning of 2020, but their presence on the memescape in the later months, when COVID-19 was the international reality, is less obvious, especially in the case of the multiple reposts. It appears that, notwithstanding the pandemic, users can still enjoy memes that disparage unknowing butts.

Generally, the recurrence of the less fresh and even irrelevant memes and memetic constructs in the space of one year may potentially be explained by the fact that, because of the "hot" topic, COVID-19 memes become so popular that they are shared and enjoyed by users who might not engage in memetic practices on social media otherwise and follow the easy path of reposting. The repetition of the very same memes across time on different platforms (that sometimes feature "top COVID-19 meme" lists) indicates that memes can indeed go viral, being made available to multiple audiences. This contradicts the academic stipulation that memes should be distinguished from virals, given that memetic content is programmatically subject to constant modification (Shifman 2013).

Overall, this study has shown that, once they come into being, COVID-19 mask memes and memetic constructs can lead long lives on memescape, even if they might be considered topically irrelevant. If users' goal is just to have fun and share whatever they deem amusing, one year is definitely too little for some of the COVID-19 viral memes and memetic constructs to die. What can be proposed as a topic of future studies is further changes in mask memes in the later months of the pandemic or after its (still) longed-for end. More generally, this work submits methodological developments to meme scholars: script-based crawling of tagged memetic data (to minimise researcher bias) and a diachronic approach to studying memes.

Authors' Contribution

Idea, M.D; Literature review (state of the art), M.D; Metodology, M.D; Data analysis M.D; Results, M.D; Discussion and conclusions, M.D; Writing (original draft), M.D; Final revisions, M.D; Project design and funding agency, M.D.

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