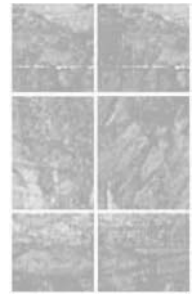


Reactions to Brexit in images: a multimodal content analysis of shared visual content on Flickr



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ABSTRACT

In this article, the authors analyze citizens' reactions to Brexit on social media after the referendum results by performing a content analysis of 5877 posts collected from the social media platform Flickr, written in English, German, French, Spanish or Italian. Their research aims to answer the three following questions: What multimodal practices are adopted by citizens when they react to societal events like Brexit? To what extent do these practices illustrate types of citizenship that are specific to social networks? Can we observe different reactions to Brexit according to the languages used by the citizens? The authors focus on the types of visual content the citizens used to react to Brexit, as well as on what types of social relations this content can particularly create between their authors and the other members of the Flickr community. Their article also highlights to what extent these posts shared on Flickr show content that is in favour of, or against, Brexit.

KEYWORDS

Brexit • content analysis • Flickr • multimodality • social media • visual content citizenship

INTRODUCTION

Unsurprisingly, citizens' reactions to Brexit swept social networks: on the day of the referendum's results, more than four million posts comprising the hashtag #Brexit were posted worldwide on Twitter within a time frame of only a few hours. In comparison, #JeSuisCharlie reached 3.5 million tweets after one day (Trujillo, 2016). While Brexit-related articles provide significant quantitative results about the role of social networks during and after the referendum campaign by means of data mining, computational linguistics or networks analysis (Bossetta et al., 2017; Connock, 2017; Hänska and Bauchowitz, 2017; Llewellyn and Cram, 2016; Mullen, 2016; Tait, 2017), our research qualitatively focuses on citizens' reactions on social media after the announcement of the referendum results. Our research aims to look into the various approaches to Brexit expressed by citizens on Flickr. More particularly, we aim to answer the three following questions: What multimodal practices are performed by citizens when they react to societal events like Brexit? To what extent do these practices illustrate types of citizenship that are specific to social networks? Can we observe different reactions to Brexit according to the languages used by the citizens?

In a society that increasingly communicates through visual means, we have chosen to focus on posts that are centered around images. For this reason, we selected the social network Flickr, which puts images at its center.

MULTIMODAL PRACTICES ON FLICKR

For Kress and Van Leeuwen (2006: 23–34), a 'new semiotic order' is developing in western societies: 'another (visual literacy) in which (spoken) language exists side by side with, and independent of, forms of visual representation which are openly structured, rather than viewed as more or less faithful duplicates of reality'. This is also true for social networks: over the years, numerous researchers have highlighted the importance of image in posts posted on social networks. In the early 2000s, the emergence of social networks went together with mass-marketed sales of digital cameras (Prieur et al., 2008). From the very beginning, sharing pictures has been an important activity in online communities (McDonald, 2007). In times of information overload, visual communication enables the reader to digest information more easily (Seo, 2014) and marketing consultants share the view that visual content is preferable, because it generates more engagement from the individuals than strictly linguistic posts (Mae Kim, 2016).

As a sign of this new semiotic order, the members of social networks moved from a 'Kodak culture' (Chalfen, 1987, in Prieur et al., 2008: 2) in which individuals share stories *around* images (family gatherings, etc.) to a 'Snapsr' culture (the missing 'e' is an analogy of the missing 'e' in Flickr), in which individuals tell stories *with* images and no longer *about* them (Prieur et al., 2008).

Founded in 2004, Flickr has centered its strategy on the sharing of images from the very beginning. In 2016, around 1.68 million public images (visible by all) were posted every day on Flickr (Michel, 2017). However, Flickr's favored types of images and modes of interaction have been subject to several strategic changes. Initially conceived as a chat room that made it possible to share pictures instantly, Flickr first developed its function of image repository. For some, this function is still the predominant one on Flickr: 'if Google is an information retrieval service, Twitter is for news and links exchange, Facebook is for social communication, and Flickr is for image archiving, Instagram is for aesthetic visual communication' (Manovich, 2016: 11). However, Flickr evolved as a fully-fledged social network, enhancing interactions between the members of the platform. 'Share your photos. Watch the world', Flickr's slogan for several years, showed how Flickr built on the collective experience – in reality a rather 'connective' experience (Van Dijck, 2011) – which is constructed through sharing visual records of the world. Around 2005, Flickr was the ultimate platform to share images of catastrophes, such as the bombing attacks in London or the floods in Australia (Liu et al., 2008; Vis et al., 2014). For several years, Twitter has overtaken Flickr as the ideal platform on which to share images of events in real-time (Burgess, 2011) and Flickr has developed other image uses. Flickr's current slogan illustrates this third shift: 'Find your inspiration. Join the Flickr community, home to 13 billion photos and 2 million groups.' This slogan focuses on the passion for photography that the Flickr members share. The Flickr community no longer seems to be built around photographic records of the world but rather around a passion for aesthetic photography. That said, this aesthetic component typifies some practices that have been present on Flickr for a long time:

... a shift in the engagement with the everyday image that has to do with a move towards transience and the development of a communal aesthetic ... Photography has become less about the special or rarefied moments of domestic/family life (for such things as holidays, gatherings, baby photos) and more about an immediate, rather fleeting display of one's discovery of the small and mundane (such as bottles, cupcakes, trees, debris, and architectural elements. (Murray, 2008: 151)

With the current slogan, expression through photography seems to explicitly supplant photographic *content*. This approach is very close to the notion of 'instagrammism', typical of Instagram. Manovich (2016: 10–11) defines instagrammism as 'not ... any particular narrow aesthetics, but rather construction of scenes and images that are atmospheric, visually perfect, emotional without being aggressive, and subtle as opposed to dramatic.'

If many Flickr members are henceforth 'photo lovers' (Seko, 2013: 3), exploring form prior to content, others still center their visual posts around real-time events, by developing a variety of multimodal practices around

tags constructed as ‘topical markers’ (Kehoe and Gee, 2011), such as Brexit, JeSuisCharlie or DonaldTrump. For example, by comparing images posted with the hashtag #ebola, Seltzer et al. (2015: 1275) noticed that the images posted on Flickr were ‘more serious and literal’ than the ones on Instagram. This seems to reveal that the Flickr members were more interested in sharing visual records without aesthetic explorations.

In this context, our research aims to identify the roles images play in multimodal posts on Flickr around the expression ‘Brexit’, and to what extent these roles illustrate citizen practices that are specific to social networks.

CITIZENSHIP ON FLICKR

Papacharissi (2010: 19–20) highlights ‘the long history of imperfect citizenship’: over the centuries, several analysts (Rousseau and Putnam to name only a few) tended to over-estimate and idealize the citizen practices of the former generations, and consequently considered the citizens of their times as passive, disconnected and cynical. From this perspective, citizen practices on social networks are denigrated when they are studied in light of Habermas’ (1989) paradigm of the ‘public sphere’. For Papacharissi (2010), this model no longer allows us to truly seize the citizen potential of digital media, to the extent that the current citizen practices no longer correspond with the rational democratic exchanges organized in non-commercial spaces, as advocated by Habermas. Instead, it is necessary to take the hybridity of online spaces into account, which are composed of political and social activities mixing the public, the private and the commercial interest. Thanks to the visibility and sharing possibilities provided by social networks, every citizen can express his or her opinion or take part in a citizen action in the middle of his or her ordinary media consumption, which creates a tendency for ‘citizenship as consumption’ (Hartley, 2010: 238).

For Papacharissi (2010: 78), ‘Political life has developed out of the human need for sociability, and, as such, it adopts the practices and pace of social life.’ Accordingly, it is unrealistic to try to identify activities that would be strictly political. The ‘private social sphere’ (p. 21), at the crossroads between the public and the private spheres, has become the focal point of any citizen activity online. The post-Brexit referendum posts particularly need such an approach: our corpus is composed of citizens’ activities placed at the core of daily online activities. Moreover, they are written as reactions to societal events and not as purely political mobilizing actions. Such post-referendum practices seem to be *democratic* but not *democratizing* (p. 144), to the extent that they do not belong to citizens’ movements that call for societal changes. Rather, they take the form of ‘ambient communities’:

The connections are ‘ambient’ in the sense that other users are potentially present within the social network, but not necessarily linked together through connections between user accounts, or by direct

conversational exchanges. Instead, social affiliation may be enacted via participation in large-scale practices such as Internet memes (e.g. viral catchphrases or captioned images) and social tagging. (Zappavigna, 2015: 1)

That said, the fact that citizens do not explicitly position their activities as civic engagement does not diminish their civic relevance (Burgess et al., 2006: 6).

With such post-referendum posts, Flickr is used as a public *space* rather than as a public *sphere*: the first enhances discussion while the second aims to promote democratic progress (Papacharissi, 2010: 124). The construction of a democratic public space is sufficient to consider such practices as civically valuable.

Such citizenship inscribed in a private social space generates specific characteristics. We focus on three of them:

1. Affective citizenship: through their hybridity, social networks generate civic expressions that are less deliberative or rational and in which affect is placed at the very core. For Papacharissi (2015: 114), beyond emotions, affect refers to the intensity of the lived experience: 'It marks the difference between saying something and shouting it loud, crying quietly or crying violently.' By expressing their affect, individuals make their own place in the events that are taking place, which gives them 'the feeling of being counted' (Coleman, 2013, in Papacharissi, 2015: 25) in the event. 'Affective publics' arise, which Papacharissi (2016) defines as 'evanescent publics that come together, identify themselves or disconnect based on expressions of sentiment'.
2. Personalized citizenship: the civic expressions are mostly constructed in function of the individuals' personal experiences; it is from the private social life that civic expression emanates (Papacharissi, 2010). The resonance of a topic in relation to citizens' personal life plays an important role (Nahon and Hemsley in Highfield, 2016: 65). Even when they make and share pictures of events, the internet-users practice a form of citizen journalism defined by Mortensen (2011) as a desire to witness one's personal experience of the events and to share it, instead of any feeling of responsibility or moral duty. In that sense, visual records are also anchored in personal experience. This practice of citizenship takes place in daily life: political and civic issues are topics among others (Highfield, 2016). For Gunthert (2015: 117), the concept of citizen journalism is overstated. In fact, most practices of citizen photojournalism can be defined as a form of ordinary citizenship: indeed, now that any individual can witness events with his or her Smartphone, many people are used to recording the world that surrounds them by making pictures of events, rather than performing conscious activist actions (Mortensen, 2011).
3. Cultural citizenship: Burgess et al. (2006) develop the notions of 'cultural public sphere' and 'cultural citizenship' to highlight the importance of taking affect and pleasure into account when analyzing civic participation. Pleasure is rooted in creativity. We distinguish between

two types of creativity: (1) artistic creativity, by which individuals mobilize their passion and their artistic skills to express their civic point of view, and (2) humorous and slightly irreverent creativity. The latter refers to the concept of ‘silly citizenship’, defined by Hartley as a constitutive element of the younger generations’ civic engagement:

Still more weirdly for social theory ... the stage for citizenship is ... as much dramatic and performative as it is deliberative. The play’s the thing ... For too long, educated taste has refused to admit that the civic and the silly are in intimate physical contact ... Here is a new model of citizenship based on self-representation of, by and for ‘ordinary’ people, using ‘new’ media to produce discursive associative relations, superseding the modernist ‘man with a gun. (Hartley, 2010: 241–245)

Using these types of citizenship as our starting point, our hypothesis was that our corpus of post-referendum posts posted on Flickr particularly comprises:

1. Affect-loaded texts, in which declarative and emotional content prevails over deliberative content;
2. Indexical pictures of eye-witnessed events, taking the form of ordinary journalistic citizenship;
3. Posts that pay a premium for artistic creativity (through aesthetic renderings) or for humorous creativity (by sharing comic content typical of the digital culture, such as memes, humorous interdiscourse, parodies, etc.).

Moreover, we wanted to examine whether language-based distinctions between citizens’ practices about Brexit were observable on Flickr. By analyzing 266 Brexit-related press articles published in French, Spanish and Italian newspapers, the week preceding the vote, Garcia-Blanco et al. (2016: 45) observed the predominance of the Nation-States in Brexit-related concerns (impact on national economies, etc.). We wanted to know whether the trends described by Garcia-Blanco were also reflected in reactions to Brexit on Flickr. Therefore, while mainly working with English-language posts in our study, we added posts in French, Spanish, German and Italian to construct a multilingual corpus. We chose these languages based on the EU’s 2012 Eurobarometer survey data, which indicate that these five languages are the most important languages in the EU in terms of the number of native- and second-language speakers (European Commission, 2012).

METHODOLOGY

We collected all the posts containing ‘Brexit’ in the text or as tags published between 24 June (the day of the announcement of the referendum results) and 23 July 2016 in English, German, French, Spanish and Italian, on Flickr.

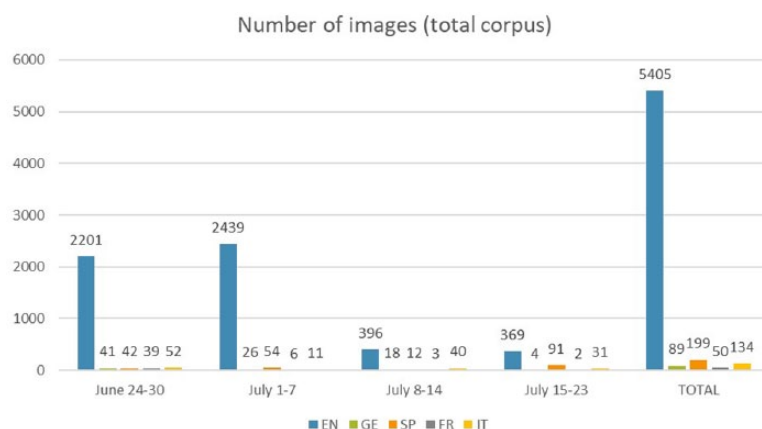


Figure 1. Number of posts, per week and per language, composing our Flickr corpus.

Flickr posts can be defined as ‘multimodal texts with distinct “writing spaces”’, in which the visual content is surrounded by a large amount of linguistic signs that can fulfill various functions (Barton, 2015: 49). Flickr is composed of the following default display: the central zone, dedicated to the image, is situated in the upper part of the post. The zone under the image includes the members’ names and their profile pictures, the tags, as well as the number of views, faves and the comments left by other Flickr members. The two most important writing spaces are the title and the description zones. Some Flickr affordances (faves, comments, tags) enable social relations between the platform’s users. That said, not all of them are used in practice. For example, Barton observed that most tags are created by the photographers when they upload their pictures, even when by default, anyone can add tags at any time (p. 51). In our corpus, comments and faves were particularly rare and were not taken into account in our analysis.

Some images can have the same text, when the images belong to a photo album, for instance. Our corpus comprises a total of 5877 posts. Figure 1 shows the posts per week; the figures of the four weeks are summed up in the ‘total’ section on the right.

We did not base our selection on Flickr members’ geographical localizations – impossible to identify in a rigorous manner – but on the language they used in their message. For this reason, we suppressed the posts that did not contain any language indicators, regardless of whether these indicators were in the image itself (a picture of a press article, for instance) or in the title/description zones of the image. Such posts were rare, particularly as the language indicators could be very minimal, such as the mention of the date of the photography (e.g. ‘2nd July 2016’ in English, for instance). It is important to underline that our corpus is based on the language used by the citizens to express themselves in these posts, and not on their mother language. This particularly concerns the corpus in English as it undoubtedly comprises

posts published by non-Anglophones. When another language prevailed over English in such posts, we took the other language into account.

Our method is inspired by Halliday's (1985) systemic functional approach to language. This approach considers that

grammar goes beyond formal rules of correctness. It is a means of representing patterns of experience ... It enables human beings to build a mental picture of reality, to make sense of their experience of what goes on around them and inside them. (p. 101)

Halliday's systemic functional approach to language is a model for thinking about general social and semiotic processes; it is not limited to linguistic signs and can be applied to visual signs as well, which explains its predominance in research on multimodality. As Kress and Van Leeuwen (2006: 2) emphasize, visual semiotic systems point to particular interpretations of experience and forms of social interaction, such as linguistic semiotic systems, which systemic functional grammar aims to analyze.

Halliday's theory comprises three metafunctions of language:

The function to represent events and states of affairs in the world (the ideational function), the function to represent the social relations between participants in an interaction (the interpersonal function), and the function to represent a coherent account of the world of the message (the textual function). (Kress, 2001: 197–198)

In other words, the ideational function 'indicates the salient participants [i.e. the objects and elements] and the process which relates to them, usually seen as the "content" of a sentence' (Kress, 2001: 204); the interpersonal function concerns 'how readers are addressed and "managed"' (Bezemer and Kress, 2016: 77) and the textual function is related to the internal organization of the signs. These three functions are simultaneously fulfilled in semiotic systems; they are complementary and therefore require to be jointly analyzed. Our analysis focuses on the ideational and interpersonal functions of the Flickr posts.

The following ideational and interpersonal categories were elaborated in an initial coding book, which was tested by two researchers on a sample of the English corpus (550 posts, roughly 10% of the corpus) and refined as the test phase progressed. The selection of the categories was therefore both inductive and deductive.

We analyzed the **ideational function** at three levels by trying to answer the three following questions:

1. Do the posts contain direct, indirect or no connection with Brexit? This connection was visible in the image and/or in the text. It is worth noting that, unlike the hash-tagging practices on Twitter, Flickr members can add up to 75 tags. Some posts are thus composed of multiple tags,

among which the 'Brexit' tag might be without any connection with the other tags or even with Brexit itself. We removed from our corpus the posts that were not connected with Brexit through their visual content or their text, despite the use of the 'Brexit' tag, as our research questions do not apply to such unrelated content. Such posts were pictures of the Rocky Mountains without Brexit-related text, for example. A post was considered as indirectly connected if Brexit was mentioned as a general context for another topic. A picture of London bikes available for hire by the public entitled 'Brexit bikes' illustrates such indirect posts.

2. Is the point of view on Brexit positive, negative or undetermined?
Again, the point of view was reflected in the image and/or in the text. In order to avoid any haphazard interpretation, our analysis took manifest and explicit content into account. Consequently, we did not aim to determine what the post's author *thinks*, but what he or she *shows*: a message without any political comment containing a picture of an anti-Brexit march was considered as negatively-oriented and independently of the author's personal opinion, to which we did not have access. One can imagine that this person is against Brexit as he or she attended this march, but we cannot be certain.
This distinction between positively and negatively-oriented posts enabled us to evaluate to what extent the Leave camp dominated on social networks after the referendum results, as it was the case during the referendum campaign (Llewellyn and Cram, 2016: 90; Mullen, 2016: 89; Polonski, 2016: 94), or whether anti-Brexit emotion got the upper hand once the results were known. Undetermined posts are posts in which the researchers do not identify positive or negative markers, in the image or in the text.
3. What types of visual content did citizens use in the posts? Contrary to the two preceding research questions, this question only concerns the visual components of the posts. We distinguished between the following 11 types. These categories are mutually exclusive. As indexical photographs are central on Flickr, we divided the Brexit-related indexical photographs into seven subcategories, which differentiate between animate and inanimate content.

Some categories are particularly easier to seize with examples. Images of broken chains or pictures of exit signs are common examples of metaphorical images.

Brexit-unrelated indexical photographs are pictures of content that have no connection with Brexit; the connection only lies in the text, as in Figure 4. Pictures of personal belongings, such as flowers from one's garden, also belong to this category.

Images of banknotes are examples of catch-all images, which can be used for journalistic purposes in various contexts. Portraits of politicians which do not show any particular context are also considered as catch-all images for instance.

Table 1. Our categories and related Cohen's kappas for the connection with Brexit, the opinions on Brexit and the types of visual content, on the English sample.

Ideational functions	Cohen's kappa
1. Direct, indirect or no connection with Brexit	0.880
2. Positive, negative or undetermined opinion	0.855
3. Types of visual content	0.844
3.1. Diagrams and graphs	
3.2. Brexit-related indexical photographs	
3.3. Brexit-unrelated indexical photographs	
3.4. Symbolic and metaphorical images	
3.5. Narrative images (i.e. cartoons)	
3.6. User-generated content	
3.7. Catch-all media images	
3.8. Pictures of journalistic content (pictures of headlines, screenshots of TV programs)	
3.9. Unmodified cultural artifacts	
3.10. Messages from other social media	
3.11. Other	

Table 2. Our categories and related Cohen's kappas for the types of social relations, on the English sample.

Interpersonal functions: types of social relations	Cohen's kappa
1. Information sharing	0.878
2. Eye-witnessing	0.944
3. Intimacy sharing	0.733
4. Affective remediation	0.799
5. Artistic renderings	0.949
6. Playing with Brexit	0.957
7. Expressing personal points of view	0.890

The category of user-generated content contains posts which are typical of popular digital culture (memes, humorous interdiscourses, etc.). Some posts may contain existing cultural artifacts, like the cover of the Sex Pistols' single 'God Save the Queen' accompanied by the text 'Britain punk again! #brexit #byebyebritain #shipoffools #lifeisacarnival'.

In order to analyze the **interpersonal function**, we tried to identify the types of social relations that these posts enhance. Zappavigna (2015: 10–11) underlines how much citizens use the interpersonal function to express positions regarding topics or to build 'ambient communities'. From this perspective, we analyzed the types of social relations that the posts might enhance between the message's author and possible readers. These social relations can

be observed in the visual content and/or in the text. We identified seven types of social relations, which are not mutually exclusive. On the contrary, posts containing solely one type of social relation are expected to be quite rare, as it is possible to play around with visual content and express one's point of view in the comment, for instance.

The information shared can be journalistic or, more rarely, personal information. It can be contained in the image and/or in the text. Intimacy sharing concerns pictures of personal or ordinary moments like a post-Brexit consolation cake. Our category of 'affective remediation' is inspired by Deuze's approach: according to Deuze (2006: 4), 'we adopt but at the same time modify, manipulate, and thus reform consensual ways of understanding reality (we engage in remediation)'. In a broad interpretation of Deuze's definition, we define affective remediation as factual relay of the referendum announcement, without any personal comment, by selecting an image (the EU flag with a missing star for example), and sometimes also by means of a text ('Brexit has arrived', for instance). Neutral by definition, affective remediation cannot be observed in corpora with positive or negative points of view on Brexit. By indulging in affective remediation, the social media members personally relay the announcement of an event, while this info is already known by all. The function of this relay seems to lie not so much in information sharing as it does in the desire to personally take account of this major event and share this account with the virtual community. From this perspective, this practice of affective remediation is in line with the notion of 'affective publics' (see section 2) and the desired feeling of 'being counted' in the course of events (Coleman, 2013, in Papacharissi, 2015: 25). For Gunthert (2015: 50), recording an event with visual content allows you to face up to the shock of the event. Affective remediation belongs to such confronting recording. When facing a trauma, producing images is an activity that allows you to regain a foothold and find your bearings.

Affective remediation can be performed through various visual forms, mostly combined with text: digital images (see Figure 2), metaphorical images (see Figure 3), Brexit-unrelated pictures (see Figure 6) or pictures of Brexit-related inanimate content (see Figure 7). In Figure 1, the text 'Brexit font and UK flag (CCO public domain). Own work published with cc0 licence' is limited to metadata. In the other three posts, the text is exclusively denotative and minimalist, as affective remediation is not meant to express personal points of view: 'EU is missing a star' (Figure 5), 'Goodbye' (Figure 6) and 'Brexit. How the vote went in the end.' (Figure 7).

Figure 7 illustrates the categories of unrelated-Brexit pictures as well as artistic renderings. Here, the focus lies in rendering the event through artistic photography.

In the category 'artistic renderings', the Flickr members share artistic content, such as aesthetic pictures of Brexit-related events or of Brexit London. To a lesser extent, they also share paintings or other artistic renderings. This

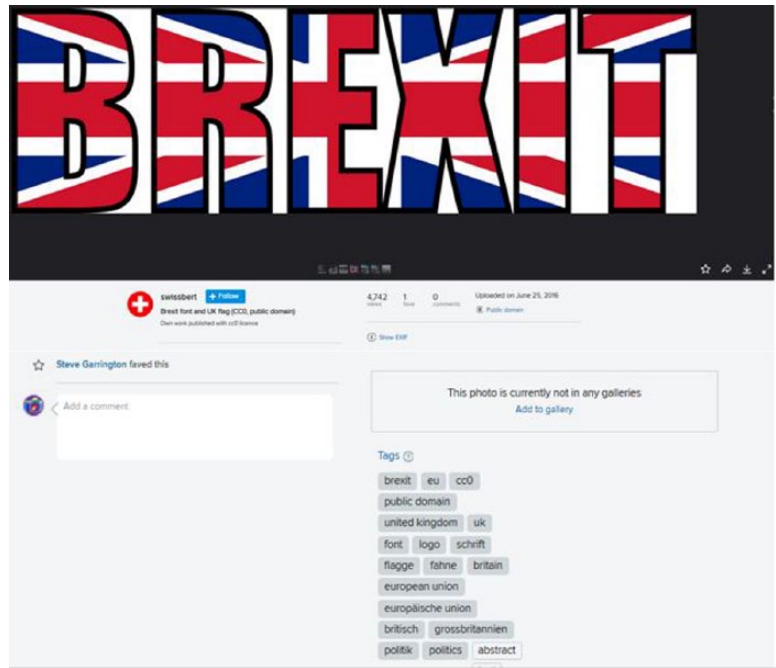


Figure 2. Example of post and tags on Flickr (CCO public domain: Own work published with CCO licence). © Norbert

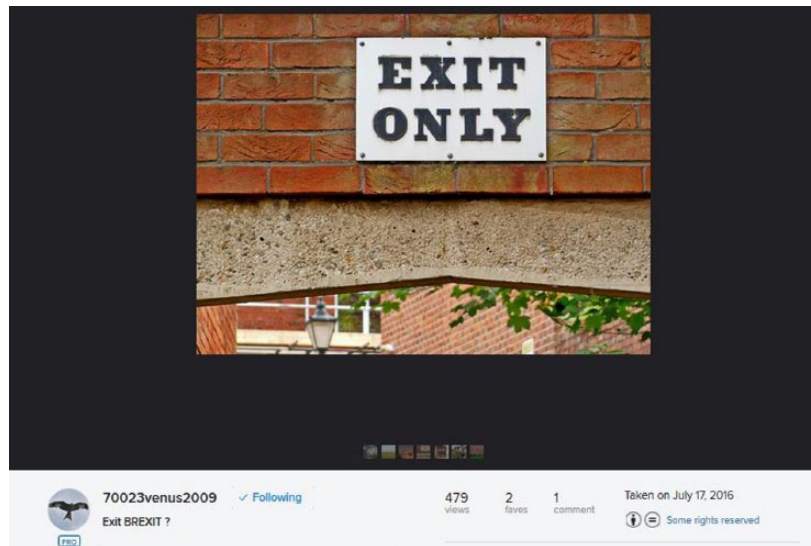


Figure 3. Example of a metaphorical image in our corpus. © Michelle Howe

category differs from the subcategory of eye-witnessing art or creativity in the street. In the latter case, the Flickr members position themselves as external observers who eye-witness the public space. Playing with Brexit can be done

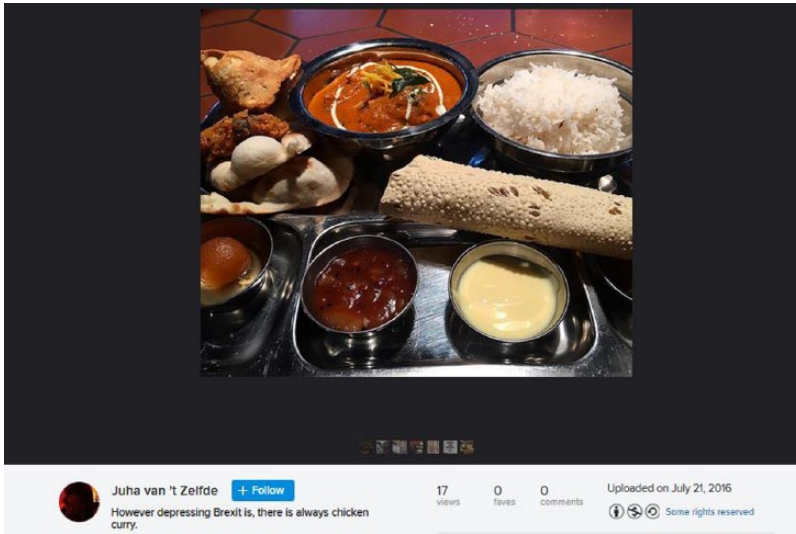


Figure 4. Example of a Brexit-unrelated indexical picture in our corpus. © Juha van 't Zelfde

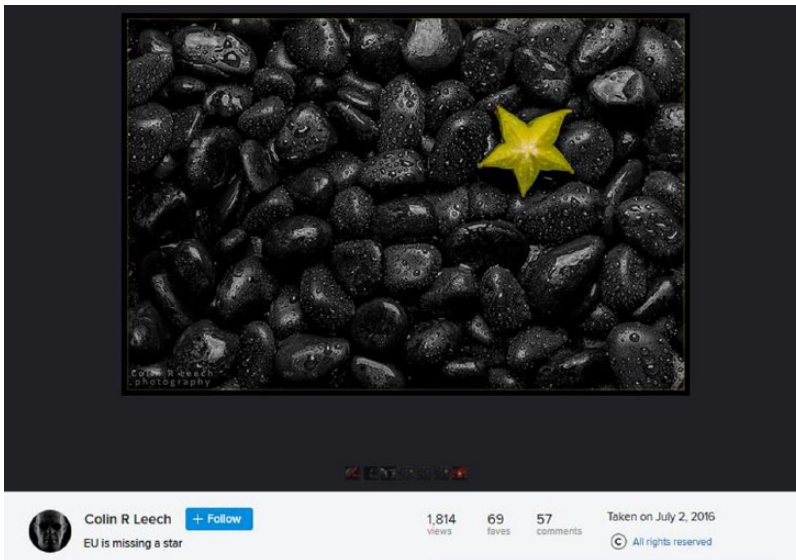


Figure 5. Metaphorical image used for affective remediation. © Colin R Leech.

by using subversion or humour, in sharing cartoons or memes for instance, or in expressing funny comments.

As can be observed from the tables, Cohen's kappas were each time calculated to evaluate the annotations on the English sample done by two researchers independently from each other. The high Cohen's kappas indicate the stable and univocal character of the categories. Cohen's kappas can only be calculated for mutually exclusive categories. For the types of social relations,

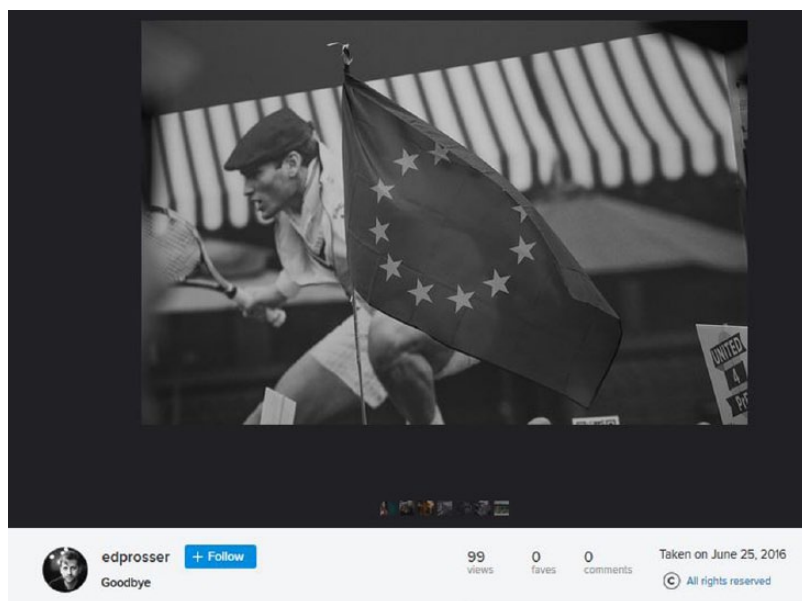


Figure 6. Artistic picture of a Brexit-unrelated event used for affective remediation.
© Ed Prosser



Figure 7. Picture of Brexit-related inanimate content used for affective remediation. © Mick Baker

which were not mutually exclusive categories, we calculated Cohen's kappas for each type of social relation separately, by comparing whether they were present or absent in each message. Calculations of Cohen's kappas concern here a coding choice between two possibilities (presence or absence) while, in

reality, the coders selected the present categories among seven possible types of social relations. As Cohen's kappa takes the number of possibilities into account (coded equally, the bigger the choice between possibilities, the higher the kappa), comparing the codings of non-mutually exclusive categories generates kappas that are bound to be lower. Consequently, we consider our kappas as even more satisfactory.

After these calculations, all the posts that were coded differently by the two researchers were discussed to refine the categories again and suppress any ambiguity.

For the analysis of the entire corpus, the posts were divided by language and for each language there was one annotator. To address the issue of single-coding reliability, the total corpus was coded twice with an interval of one month in between the coding sessions. The coding generated identical results, which confirmed the reliability of the categories (Kouper, 2010). During the coding and analysis process, ambiguous posts in any of the five corpora, i.e. when researchers hesitated about the most relevant category, were discussed among researchers.

RESULTS

All the 5877 images of the corpus were analyzed separately. The results are presented for weighted corpora in English, Spanish and Italian. In these weighted corpora, we take one image per series into account (weighted corpus). These series are sets of photographs taken at the same place by the same person during a short period of time and comprise the same titles and descriptions. Most series are compiled in albums on Flickr and consist of dozens of photographs. A typical example of this is a series of 50 pictures of an anti-Brexit march taken and shared by one Flickr member. The weighted corpora prevent us from awarding disproportionate weight to images taken in series and invite us to show the various modes of participation in these public spaces on Flickr to their best advantage. There was no weighted corpus needed in French and in German, as these corpora do not contain images in series. Weighted corpora were used in English (2229 posts), Spanish (67 posts) and Italian (88 posts).

Ideational function: the connection with Brexit

Table 3 reveals that over one quarter of the posts in English are not directly related to Brexit, neither through the image nor through the text. This proportion is, in fact, close to the one for posts in German and Italian, whereas such posts do not achieve 10 percent in Spanish and are nearly non-existent in French. In these indirectly-related posts, Brexit is used either as a general context for other topics (Brexit bikes for instance) or is included without any apparent reason in everyday life posts that these Flickr members share on the platform. Since we coded an explicit connection between the image and Brexit, some of them may have been assessed as lacking a connection while

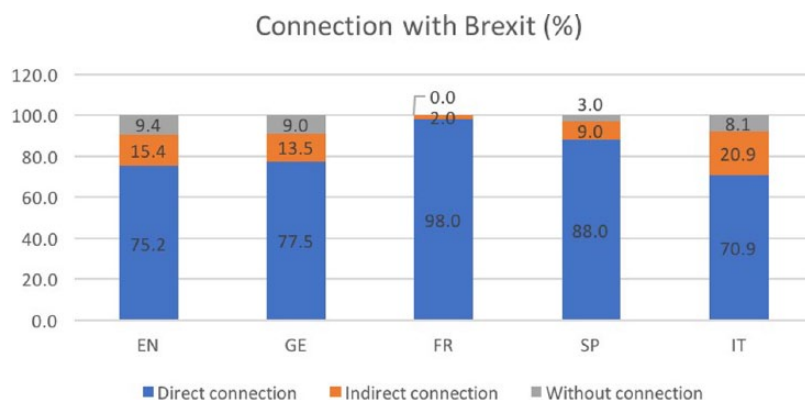


Figure 8. Types of connection with Brexit (weighted corpora in English, Spanish and Italian).

such connection might exist in the authors' minds. Given that the link was not apparent for the researchers, it would probably not be apparent for the other Flickr members either.

Ideational function: point of view on Brexit

Figure 9 shows that undetermined and negative points of view are much more prevalent than positive ones. Posts with undetermined points of view occur in 40–50 percent of the cases in English, French, Italian and German, and prevail in Spanish (80%). One might consider that the several anti-Brexit demonstrations and marches could partially explain these results, as images of these events were numerously shared on Flickr, but this explanation is only valid for the corpus in English, as most Brexit-related events took place in the UK. While positive content dominated social media during the referendum campaign in the UK (see Methodology), it does not even achieve 10 percent in the English, French, Spanish and Italian corpora and only reaches 11 percent in the German corpus. The high rate of undetermined points of view illustrates that Flickr is not a platform where individuals systematically defend fixed positions.

Ideational function III: types of visual content shared on Flickr

Figure 10 presents the distribution of the types of visual content. First, it shows that Brexit-related and unrelated indexical pictures are the main categories. Together, these two categories hardly reach 50 percent of the corpus, which implies that Flickr's function of image repository is central but never prevails. Second, four categories reach close results: symbolic or metaphorical images, narrative images (cartoons for instance), user-generated content and catch-all images. A third set of four categories bring up the rear, each never achieving 3 percent.

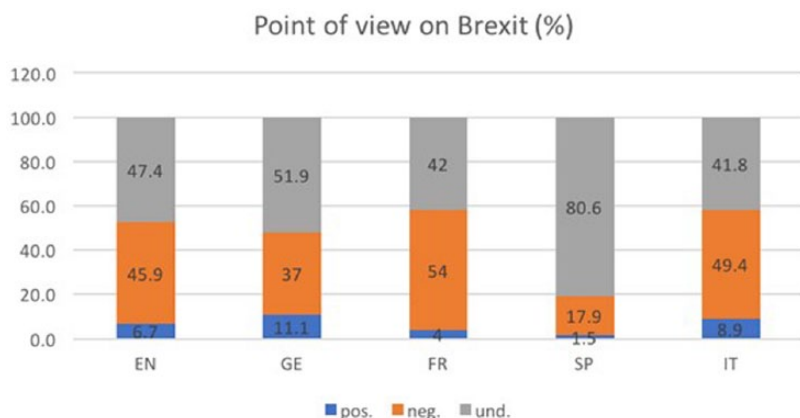


Figure 9. Points of view on Brexit (weighted corpora in English, Spanish and Italian).

Brexit-related and unrelated indexical pictures are also prevalent in the German corpus. As in the English corpus, a distinction can be drawn between two sets of categories according to their frequency, namely diagrams, symbolic, narrative images and user-generated content on the one hand, and catch-all images, journalistic content or cultural artifacts on the other. The category ‘other’ mostly comprises Brexit-unrelated advertisements. In slightly different proportions, this balance between the categories is also observed in the corpus in French. Subversive content is more prevalent than in other corpora, as narrative images (mostly cartoons) and user-generated content account for over 30 percent together. The Spanish corpus is exceptional in that it contains a relatively high percentage of screenshots of journalistic content (headlines, news articles or TV shows). Indexical pictures that are related or unrelated to Brexit are the second most frequent category. Finally, in the Italian corpus, user-generated content and metaphorical pictures are the most prevalent categories, followed by four other categories: Brexit-related indexical pictures, catch-all images, narrative images and, to a lesser extent, Brexit-unrelated images. Surprisingly, the Italian corpus does not contain any journalistic content, namely pictures of headlines, etc.

Interpersonal function: types of social relations

Lastly, we analyzed the types of social relations that the posts enhance. In other words, what types of inter-individual exchanges are constructed to express oneself about Brexit, between authors and potential readers? As we mentioned in our methodology, we did not focus on the authors of the posts’ real intentions, which we do not have access to, but on the types of social relations that the posts’ readers can identify. The first diagram represents the results of the English corpus. Since the types of social relations are not mutually exclusive, the total percentage is higher than 100 percent.

Types of visual content (%)



Figure 10. Types of visual content shared on Flickr (weighted corpora in English, Spanish and Italian).

Similar to Figure 10, which showed the high rate of indexical pictures, Figure 11 highlights to what extent the function of eye-witnessing is important but not predominant. Significantly, these results confirm that Flickr fulfils roles other than image repository. Next, the category of self-expression occupies an important role but is not observed in the majority of posts (42%). As the analysis revealed (see Figure 9), the ideational function related to the point of view on Brexit illustrated that Flickr was not a dividing platform; the results related to the types of social relations further underlines this as they show that self-expression is a current but not systematic practice. Around 22 percent of the posts fulfill the function of information sharing. The lion's share of this information comes from professional media. Some individuals share personal knowledge but this is a very peripheral practice. The relatively high rate of the 'playful' type of social relation might be surprising as such content is not based on indexical pictures, central to Flickr, but mainly on cartoons and user-generated content. Around 11 percent of the posts share artistic content. Most of them are aesthetic pictures, like aesthetic pictures of anti-Brexit demonstrations, for instance. Around 11 percent of the posts are meant to share personal moments, like pictures of garden flowers 'to take away the Brexit pain' or meals celebrating the victory of the Leave campaign. The category 'affective remediation' was identified in less than 2 percent of the corpus (in 4% of the posts with an undetermined point of view). Surprisingly, such posts did not appear primarily in the days directly following the referendum results, but were present in the four weeks of collating our corpus. One could indeed expect that such affective posts would occur more frequently just after the announcement of the referendum's results, as immediate reaction.

The results for the German corpus confirm the predominant uses of eye-witnessing and self-expression, especially in posts in favor of Brexit. Information sharing and play form the second set of popular types. Sharing personal aspects or artistic content achieve similar results in comparison with the English corpus. Affective remediation is slightly more frequent than in the English corpus. In the French corpus, self-expression is the predominant category. Play is the second most popular category, followed by eye-witnessing. The results for the Spanish corpus show significant differences: in the Spanish corpus, information-sharing is the predominant category, while eye-witnessing, play and self-expression form a set of secondary categories. Sharing personal aspects also appears rather often. In the Italian corpus, more posts fulfill several functions at the same time. Information-sharing and self-expression are predominant ones, as well as play, which achieves its highest level in the Italian corpus, in comparison with the other corpora. Eye-witnessing can be considered a secondary category, together with sharing personal aspects. Affective remediation and sharing artistic content are peripheral categories here.

In all corpora, self-expression is usually absent or very limited when posts share information. In some cases, pictures of headlines or TV programmes fulfil the function of eye-witnessing, as they are used to testify the

Types of social relations (%)

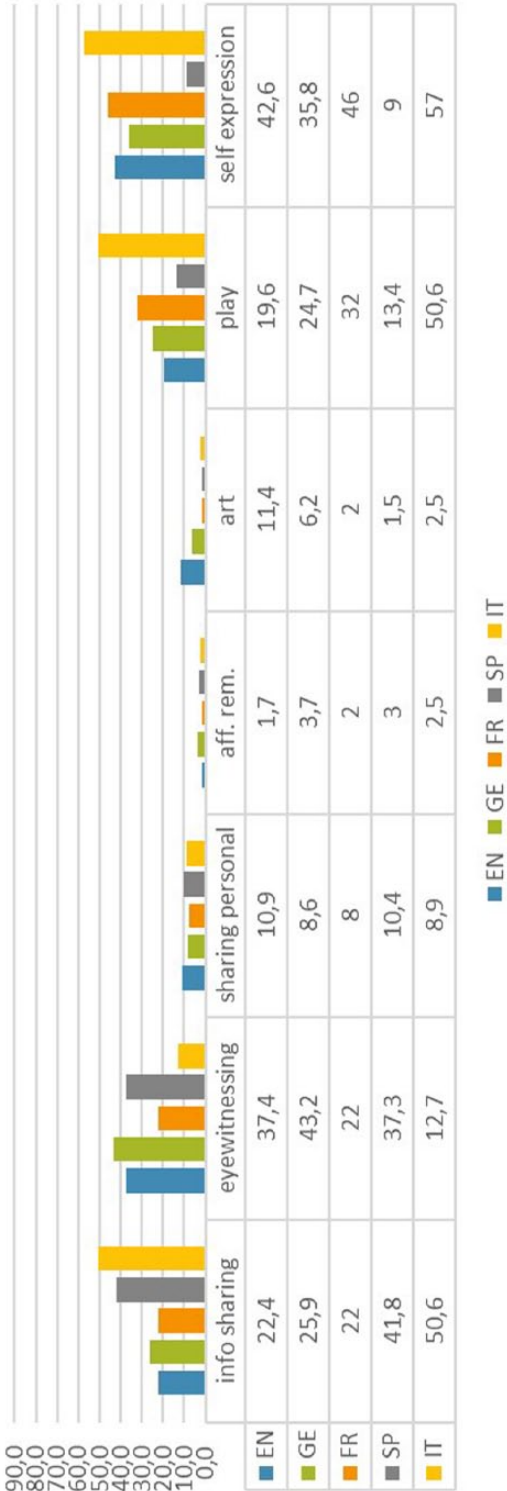


Figure 11. Types of social relations (weighted corpora in English, Spanish and Italian).

authors' experience of Brexit. For instance, one post contains the screenshot of TV news and the comment 'watching the Brexit results'. In such cases, the post is not meant to share information – the TV screenshot does not contain any concrete information anyway – but to share the Brexit experience that the author is spending time in front of the television.

Localization through ideational and interpersonal functions

Our corpora are exhaustive but rather small for German, French, Spanish and Italian. In order to identify further language-based differences, we therefore complemented our quantitative results with a qualitative approach. In his study on headlines, Garcia Blanco observed a tendency to 'localize' Brexit in the French, Spanish and Italian press by focusing on Brexit from a national perspective (see section 3). A qualitative analysis of our multilingual corpus revealed a similar trend, and it allowed us to identify four types of localization.

1. Localization through public and private events

Unsurprisingly, indexical pictures of public and, even more so, of private events show localization processes: in the English corpus, the main type of Brexit-related pictures concerns public events that took place in the UK (demonstrations, marches). Similarly, the indexical pictures of public events in the French and the Italian corpora show scenes of Brexit London. However, in some cases, the comments accompanying these pictures connect the Brexit events to the local context. For example, the picture of a demonstrator's board poking fun at Boris Johnson is given 'Borisconi' as title, as an allusion to former Italian Prime Minister Silvio Berlusconi. Eye-witnessing British events is thus sometimes used as an opportunity to express oneself about one's own country.

In addition, localization is found in pictures of private events organized in Spanish-, French-, and German-speaking countries. Some private events focus on the consequences of Brexit for citizens of specific nations (for instance for Ecuadorian nationals residing in the UK), while others are meetings of politicians in which Brexit is discussed as an issue influencing national political affairs.

2. Localization through inanimate content

In the English corpus, no matter how diverse the inanimate content is (political material such as badges and leaflets, Brexit-related street art or written messages in the public space, comments on black boards of restaurants and pubs, newspapers spotted by pedestrians or commuters), there is generally a clear link with the UK. In the other subcorpora, some posts of inanimate content topicalize Brexit without any markers of localization, while others do make a clear reference to the national context. For instance, the German cor-

pus contains a picture of an advertisement on London streets that portrays Berlin as the place to be for companies in a post-Brexit era, and the Spanish corpus contains a similar post showing a London tourist bus which displays the promotional text ‘Madrid will be there for you’, thus persuading companies to invest in the Spanish capital. In a similar vein, the French corpus contains cases of London-based inanimate content with comments establishing a connection to French politics, as in the post which shows a board in the street mentioning ‘happy now? ... Idiots’ and to which the post’s author gave Sarkozy’s famous dirty talk ‘Casse-toi pauvre’ con... #brexit #europe #hangover’ as title (‘Sod off, you prick!’ our translation), which now belongs to French common ground. Finally, some Italian posts share pictures of inanimate content related to Italian demonstrations about fascism, where Brexit is integrated in the comment as a peripheral topic.

3. Localization through caricatured political contexts

In the English corpus, British politicians (e.g. Boris Johnson, Nigel Farage, Theresa May) are recurring characters in cartoons as well as in user-generated parodies and spoofs of popular culture: Theresa May’s cabinet in Lego blocks or Brexit at Tiffany’s, etc. In the other corpora, localization is very frequent in that it presents local politicians who are either active on the national or on the EU level in caricatures. In the French corpus, for instance, the unionist Philippe Martinez is mocked for playing a role in Brexit. Many cartoons and user-generated spoofs in the Italian corpus feature Italian politicians such as the Italian president of the Central Bank Mario Draghi or the former Italian Prime Minister Matteo Renzi. Similarly, the German corpus contains a professional cartoon portraying Theresa May and Angela Merkel. In the Spanish corpus, we also find an example in which not local politicians, but local politics, are targeted. A comment to a political cartoon establishes a direct connection to the Mexican economic and political context: ‘Between what is happening now and what will happen in future, we no longer know which one will attack us first #Oaxaca #Brexit #Dolar and #Petroleum’ (our translation).

4. Localization through news

Pictures of headlines, news articles or TV programmes, which mostly meet the requirement of information-sharing (sharing the various editorial approaches to Brexit with the Flickr community), are often localized by the fact that journalistic content of local news media is shown, for instance screenshots of German YouTube videos in the German corpus, and posts showing French media and addressing French political reactions to Brexit in the French corpus. Localization of this kind is much less frequent in the Spanish corpus, which – with the exception of two posts referring to the Spanish-language

press – mainly contains journalistic content referring to UK headlines. In addition, journalistic content in the Italian corpus connects Brexit to other nationalistic movements in the EU, such as in a post showing Marine Le Pen during a political meeting of the Front National, with the text ‘The European Union is still shaken by what happened on Thursday in Britain. The referendum on Brexit continues on: www.diggita.it/v.php?id=1543596’ (our translation). In those cases, opinions on Brexit rise above nation-based concerns in favor of European issues.

While many posts in our corpora in German, French, Spanish and Italian show one or several of the four localization types, a substantial proportion do not illustrate local approaches to Brexit. Unlike Garcia-Blanco, who identified a clear majority of local-based Brexit headlines, our corpora reveal more balanced proportions. Interestingly, none of the posts that include a metaphorical picture approach Brexit news by relating it to specific local content. This might be due to the function of metaphorical pictures, which are used by citizens to express how they feel about Brexit from a general perspective, without expressing substantiated opinions in the title and description sections. The most recurrent metaphors include flags, closed fences, objects floating or diving, signs of exit (like Figure 3), stormy or cloudy weather, broken objects, planes leaving and dawn, which illustrates a rich variety of forms of cultural citizenship staging separation, catastrophe, uncharted future or exit. In some posts, the metaphor is explicitly identified as a visual representation of the authors’ points of view. For example, a post comprises a picture of closed fences and the following text: ‘What the oncoming Brexit feels like to me. Britain as a Gulag where the hangers and floggers have taken over for their selfish interests. (From the Leisure Land Mini-Golf installation by Doug Fishbone at QUAD, Derby).’

The identified difference between metaphorical posts and other types of posts suggests that citizens do not focus on local considerations when they express mere affective points of view on Brexit. Localization appears when more rational and substantiated arguments or information come to the forefront, especially about the impact of Brexit. In such cases, localization particularly appears through connections with local politicians or in local economic or political contexts.

DISCUSSION

Our quali-quantitative content analysis offers the following insights about affective, personalized and cultural citizenship (see section 2). Firstly, affective citizenship particularly appears in three types of social relations. Expressing personal points of view is, of course, the most common category for coding affect-loaded reactions, sometimes through pictures of personal aspects of life. Such a category illustrates the extent to which Flickr members share their emotions, personal analyses, fears or hopes through multimodal posts. Play is

also a common category to code such content on social media. Interestingly, our category of 'affective remediation' allowed us to identify affective reactions that are not systematically labelled in explicit emotions, as Papacharissi (2015) suggests when she insists on the intensity of the experience, which gives substance to the emotions felt:

Affect provides and amplifies intensity because it increases our awareness of a certain mind or body state that we, as adults, learn to label as particular feelings and express as a given emotion. Without affect, feelings essentially do not 'feel', for it is affect that provides the intensity with which we experience emotions. (pp. 22–23)

Affective remediation seems to be a way for citizens to express their feelings of being counted, in the turmoil of major events that upset them.

Secondly, personalized citizenship is illustrated in indexical pictures but also in other practices. Unsurprisingly, Brexit-related indexical pictures are predominant in most of our corpora. Such practices are anchored in daily life, far from any activist ambitions, and can be considered ordinary citizen journalism, in line with Mortensen's (2011) and Highfield's (2016) insights and personalized citizenship (see section 2). Sharing home-made pictures of media (Brexit-related headlines or TV shows, etc.) appears to illustrate the shift in the types of eye-witnessing identified by Mortensen (Mortensen, 2011: 70, in Vis et al., 2014: 388). For Mortensen, hypermediatization and continuous reporting imply that events can be eye-witnessed without being in the physical space and instead via images of these events shared in the media. Retweeting the image of an event seen on Twitter is also considered eye-witnessing, for instance. For Vis et al. (2014: 389), on Twitter, 'These spectators can then mark their own acts of eye-witnessing by retweeting the images.' On Flickr, individuals do not just forward images present on social media but make pictures of media content present in the public space themselves to share them in the virtual public space. This type of eye-witnessing creates a *mise en abyme* ('I make a picture of myself observing an event presented inside media reports') and thus highlights the status as observer of the photographer: As Berger (1972: 180) observed, photography 'is the process of rendering observation self-conscious'. This observation is even more relevant when what is documented in the photograph is partly the status of the image-maker as a media spectator. Here, the eye-witness is both a spectator of mainstream media news and an image-maker' (Vis et al., 2014: 395). These indexical pictures of inanimate content are 'images of mediatisation' (Gunthert, 2015: 49). Gunthert notices that, in images of the London bomb attacks in 2005, for example, the amateur photographers do not focus on the tragedy itself but on the circulation of information: boards in the underground which announce delays, people making phone calls, pictures of media content, etc. Of course, most

people do not have a ringside seat of the tragedy; they experience it through indirect consequences (delays, chaotic urban atmosphere, etc.) which they provide traces of. In the case of Brexit, which is not a visual event per se, people also keep traces of the visual signs that they encounter in their daily routines in the public space.

Thirdly, despite their high number, the proportions of indexical pictures are below what might be commonly expected by those who consider Flickr as an image repository. Our corpus analysis has revealed to what extent other types of visual content, such as user-generated content, symbolic and narrative images are also often shared on Flickr. Sharing creative content in a cultural public sphere (Burgess et al., 2006) also has its keen supporters on Flickr. This form of cultural citizenship illustrates how this type of social media platform hosts various types of visual content which enhance a real public space, beyond mere uploads of personal pictures.

Besides, our comparison of posts in five languages reveals that these three forms of citizenship are used to approach Brexit both from a more general and more localized point of view. Localized approaches are particularly common in posts that go beyond affect to rationally look at the consequences of Great Britain's choice to leave the EU. Therefore, these results are in line with Martel (2014), who highlights to what extent the global internet also leads to a multitude of local territories.

CONCLUSION

Our research focused on citizens' reactions on social media after the announcement of the referendum results, expressed in multimodal posts on Flickr. For this analysis, we elaborated a quali-quantitative, finely-grained content analysis framework, which offers insights into automated methods used for computational linguistics or networks that analysis cannot deliver, especially when dealing with visual content. To conclude, we wish to outline three limitations of our research, without depreciating the insights we provide.

Firstly, our analysis only concerns the macro level of tag- and keyword-based exchanges ('Brexit'); it did not focus on the micro level of interpersonal communication (the replies to the posts) nor on the meso level of networks (follower–followee relations). Bruns and Moe (2014: 16) highlight how these levels are interconnected and do not exist separately from each other. The analysis of these two other levels would indeed provide complementary insights to our study. It should be noted, though, that the micro- and meso-levels do not seem to be central on Flickr; the posts from our corpus were rarely commented on, for example.

Secondly, only the term 'Brexit' was selected to identify the posts that make up the corpus. If this is the most common and logical expression, we are aware that it does not permit us to gather all Brexit-related posts posted after

the referendum results. Some citizens might have used other keywords and therefore fall between the cracks. This implies that our Flickr corpus may not be totally exhaustive.

Thirdly, and perhaps more importantly, we would like to insist that, from a qualitative perspective, the categorization of human artifacts, such as posts on Flickr, will always remain an operation that reduces complex phenomena to approaching and approximate categories. Therefore, even if our high Cohen's kappas testify to our rigorous methodology, the percentages we obtained are, in our view, primarily relevant in the trends they reveal, rather than in the exact figures they deliver. Nevertheless, we are confident that the fine-grained methodology of multimodal social media posts analysis presented here allows for insights into which roles images play in these messages and which various types of citizenship they illustrate.

Finally, to compare multimodal and citizenship practices in reaction to Brexit on social media, it would be interesting to repeat this quanti-qualitative study on other social media platforms such as Facebook, Twitter and Instagram.

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REFERENCES

- Barton D (2015) Tagging on Flickr as a social practice. In: Jones R et al. (eds) *Discourse and Digital Practices: Doing Discourse Analysis in the Digital Age*. Abingdon: Routledge, 48–65.
- Berger J (1972) *The Look of Things: Selected Essays and Articles*. Harmondsworth: Penguin.
- Bezemer J and Kress G (2016) *Multimodality, Learning and Communication: A Social Semiotic Frame*. London: Routledge.

- Bossetta M, Dutceac Segesten A and Trenz B (2018) Political participation on Facebook during Brexit: Does user engagement on media pages stimulate engagement with campaigns? *Journal of Language and Politics* 17(2): 173–194.
- Bruns A and Moe H (2014) Structural layers of communication on Twitter. In: Weller K et al. (eds) *Twitter and Society*. New York: Peter Lang, 15–28.
- Burgess J (2011) Image sharing in the #qldfloods. *Mapping Online Publics*. Available at: <http://mappingonlinepublics.net/2011/03/06/image-sharing-in-the-qldfloods/> (accessed 9 December 2017).
- Burgess J, Foth M and Klaebe H (2006) Everyday creativity as civic engagement: A cultural citizenship view of new media. In: *Proceedings Communications Policy & Research Forum*. Sydney, September 25–26. <https://eprints.qut.edu.au/5056/> (accessed 4 June 2018).
- Connock A (2017) Social death: How did millennial liberals lose history's lost digital elections. In: Mair J et al. (eds) *Brexit, Trump and the Media*. Bury St Edmunds: Abramis Academic, 24–30.
- Deuze M (2006) Participation, remediation, bricolage: Considering principal components of a digital culture. *The Information Society* 22: 63–75.
- European Commission (2012) *Special Eurobarometer 386: Europeans and Their Languages*. Brussels: Directorate-General for Education and Culture, Directorate-General for Translation and Directorate-General for Interpretation and Directorate-General for Communication. Available at: http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_386_en.pdf (accessed 15 December 2017).
- Garcia-Blanco I et al. (2016) A victory of the nation state: The EU Referendum in the Southern European press. In: Jackson et al. (eds) *EU Referendum Analysis 2016: Media, Voters and the Campaign. Early Reflections from Leading UK Academics*. Poole: The Centre for the Study of Journalism, Culture and Community, Bournemouth University, 45.
- Gunthert A (2015) *L'image partagée. La photographie numérique*. Paris: Textuel.
- Habermas J (1989) *The Structural Transformation of the Public Sphere*. Cambridge: Polity.
- Halliday M (1985) *An Introduction to Functional Grammar*. London: Edward Arnold.
- Hanska M and Bauchowitz S (2017) Tweeting for Brexit: How social media influenced the EU Referendum. In: Mair J et al. (eds) *Brexit, Trump and the Media*. Bury St Edmunds: Abramis Academic, 31–35.
- Hartley J (2010) Silly citizenship. *Critical Discourse Studies* 7: 233–248.
- Highfield T (2016) *Social Media and Everyday Politics*. Cambridge: Polity Press.
- Kehoe A and Gee M (2011) Social tagging: A new perspective on textual 'aboutness'. In: Rayson P et al. (eds) *Studies in Variation, Contacts and*

- Change in English* Vol. 6. Helsinki: Methodological and Historical Dimensions of Corpus Linguistics. Research Unit for Variation, Contacts, and Change in English.
- Kouper I (2010) The pragmatics of peer advice in a LiveJournal community. *Language@Internet* 7.
- Kress G (2001) Halliday. In: Copley P (ed.) *The Routledge Companion to Semiotics and Linguistics*. London: Routledge, 197–198.
- Kress G and Copley P (2001) Ideational. In: *The Routledge Companion to Semiotics and Linguistics*. London: Routledge, 204.
- Kress G and Van Leeuwen T (2006) *Reading Images: The Grammar of Visual Design*, 2nd edn. New York: Routledge.
- Liu S et al. (2008) In search of the bigger picture: The emergent role of on-line photo sharing in times of disaster. In: *Proceedings of the 5th International ISCRAM Conference*.
- Llewellyn C and Cram L (2016) The results are in and the UK will #Brexit: What did social media tell us about the UK's EU referendum? In: Jackson D et al. (eds) *EU Referendum Analysis 2016: Media, Voters and the Campaign. Early Reflections from Leading UK Academics*. Poole: The Centre for the Study of Journalism, Culture and Community Bournemouth University, 90–91.
- Mae Kim C (2016) *Social Media Campaigns*. New York: Routledge.
- Manovich L (2016) Subjects and Styles in Instagram Photography. Available at: <http://manovich.net/index.php/projects/subjects-and-styles-in-instagram-photography-part-1> (accessed 4 June 2018).
- Martel F (2014) *Smart. Enquête sur les Internets*. Paris: Stock.
- McDonald D (2007) Visual conversation styles in web communities. In: *Proceedings of the 40th Hawaii International Conference on System Sciences*, IEEE: 76.
- Michel F (2017) How many public photos are uploaded to Flickr every day, month, year? Available at: <https://www.flickr.com/photos/franckmichel/6855169886/> (accessed 9 December 2017).
- Mortensen M (2011) When citizen photojournalism sets the news agenda: Neda Agha Soltan as a Web 2.0 icon of post-election unrest in Iran. *Global Media and Communication* 7: 4–16.
- Mullen A (2016) Leave versus Remain: The digital battle. In: Jackson D et al. (eds) *EU Referendum Analysis 2016: Media, Voters and the Campaign. Early Reflections from Leading UK Academics*. Poole: The Centre for the Study of Journalism, Culture and Community Bournemouth University, 89.
- Murray S (2008) Digital images, photo-sharing, and our shifting notions of everyday aesthetics. *Journal of Visual Culture* 7: 147–163.
- Papacharissi Z (2016) *Trump and Publics of Affect*. Medium. Available at: <https://medium.com/@zizip/trump-and-publics-of-affect-514716c4a79f> (accessed 9 December 2017).

- Papacharissi Z (2015) *Affective Publics: Sentiment, Technology, and Politics*. Oxford: Oxford University Press.
- Papacharissi Z (2010) *A Private Sphere: Democracy in a Digital Age*. Cambridge: Polity Press.
- Polonski V (2016) The results are in and the UK will #Brexit: What did social media tell us about the UK's EU referendum? In: Jackson D et al. (eds) *EU Referendum Analysis 2016: Media, Voters and the Campaign: Early Reflections from Leading UK Academics*. Poole: The Centre for the Study of Journalism, Culture and Community Bournemouth University, 94–95.
- Prieur C et al. (2008) *The Strength of Weak Cooperation: A Case Study on Flickr* (www document). Available at: <https://hal.archives-ouvertes.fr/docs/00/25/66/49/PDF/weak-coop-flickr-v1.1.pdf> (accessed 25 May 2018).
- Seko Y (2013) Picturesque wounds: A multimodal analysis of self-injury photographs on Flickr. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 14.
- Seltzer EK et al. (2015) The content of social media's shared images about Ebola: A retrospective study. *Public Health* 129: 1273–1277.
- Seo H (2014) Visual propaganda in the age of social media: An empirical analysis of Twitter images during the 2012 Israeli–Hammas conflict. *Visual Communication Quarterly* 21: 150–161.
- Tait R (2017) Understanding the Brexit result is just the start. In: Mair J et al. (eds) *Brexit, Trump and the Media*. Bury St Edmunds: Abramis Academic, 5–8.
- Trujillo E (2016) Déjà plus de 4 millions de tweets sur le #Brexit. *Le Figaro*. June 24.
- Van Dijck J (2011) Flickr and the culture of connectivity: Sharing views, experiences, memories. *Memory Studies* 4: 401–415.
- Vis F et al. (2014) Twitpic-ing the riots: Analysing images shared on Twitter during the 2011 UK riots. In: Weller K et al. (eds) *Twitter and Society*. New York: Peter Lang, 385–398.
- Zappavigna M (2015) Searchable talk: The linguistic functions of hashtags. *Social Semiotics* 25(3): 274–291.

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