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# Multimodal meaning making in news communication about immigration: using the NewsScape corpus to explore co-verbal images in TV news

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The communication of news relies on semiotic resources besides language, including various audiovisual modes of representation. Owing to the difficulties associated with obtaining televisual data, the vast majority of research addressing multimodality in the news has been targeted at print news media, where various strategies in visual representation and patterns of interaction between verbal and visual modes have been discerned. Where televisual data has been interrogated, this has been based on a very limited number of data points. In this study, I exploit the NewsScape library – a massive multimodal corpus of news communication – to investigate multimodal representations of immigration in television news. Accessible via CQPWeb, the corpus is searched for target utterances *refugees/(im)migrants have VERBed* and *refugees/(im)migrants are VERBing*. The co-verbal images accompanying 474 utterances describing motion events are analyzed quantitatively and qualitatively. Among the results discussed are that refugees/migrants are depicted in large rather than small groups, that they are depicted in transit somewhere along the migratory journey rather than in countries of origin or destination countries, that they are depicted on land more than at sea, that they are depicted in security contexts, and that they are erased represented instead through abstract forms such as maps. Differences in the visual representation of people designated as ‘refugee’ versus ‘migrant’ are also observed and discussed.

## KEYWORDS

multimodality, multimodal constructions, TV News, NewsScape corpus, immigration

## 1 Background

Refugees and migrants are among the most marginalized, maligned and disempowered people on the planet. For example, since the beginning of civil war in Syria in 2011, some 11 million people have been displaced requiring humanitarian assistance. Of these, 6 million have been internally displaced while 5 million have been externally displaced seeking asylum or being housed in refugee camps in countries around the world. In spite of such circumstances, refugees and migrants are overwhelmingly treated by the media as *bringing crisis* rather than themselves *being in a crisis*. Verbal and visual representations of migration perpetuate images of refugees and migrants as a dangerous and alien Other (Gabrialeto and Baker, 2008; KhosraviNik, 2009; Batziou, 2011; Bleiker et al., 2013; Chouliaraki and Zaborowski, 2017; Wilmott, 2017) and thus legitimate hostile anti-immigration ideologies and policies (Martin

Rojo and van Dijk, 1997; van Leeuwen and Wodak, 1999). Media discourses are particularly effective drivers of public opinion on the topic of migration. For example, negative portrayals of immigrants are shown to increase ingroup favoritism and outgroup hostility (Schemer, 2012; Schemer and Meltzer, 2019; Conzo et al., 2021; Scherman et al., 2022). When linked with crime, a negative framing of immigration in the news influences voting behavior in favor of anti-immigrant parties (Burscher et al., 2015). Conversely, exposure to more positive coverage, including instances of successful intergroup contact, results in more positive attitudes toward refugees and migrants and decreased support for restrictive border and security policies (Joyce and Harwood, 2014; Djourelova, 2023).

Within linguistics, a large number of studies have investigated media discourses of immigration from an explicitly critical perspective to identify and expose the specific semiotic forms implicated in discursive constructions of power, prejudice and discrimination (Reisigl and Wodak, 2001; KhosraviNik, 2010a). The majority of this research has been directed at the print and online content of European and North American newspapers (e.g., Gabrialetos and Baker, 2008; KhosraviNik, 2009, 2010b; Alaazi et al., 2021). While this has traditionally been an area of qualitative research, quantitative methods based in corpus linguistics are increasingly used to interrogate larger, more representative datasets (Baker and McEnery, 2005; Baker et al., 2008; Gabrialetos and Baker, 2008; Taylor, 2014; Omidian Sijani, 2023). Such quantitative methods enable more generalized patterns of representation to be discerned, help to mitigate potential biases in data selection, and facilitate systematic comparative analyses across various dimensions including time, geographic region and media institution (Mautner, 2005, 2009; Baker and Levon, 2015). Gabrialetos and Baker (2008) examined collocates of the terms *refugees*, *asylum seekers*, *immigrants* and *migrants* (RASIM) that persisted in a 140-million-word corpus of UK news articles published over a ten-year period. Collocates are words which occur within a defined span of a given “node” with marked frequency and thus with a degree of statistical predictability. The collocates of a word contribute to its semantic profile (Stubbs, 1995). Crucially, as a result, the concept lexicalized by a collocate may be primed on occasions when the collocate is not actually present (Stubbs, 1996, 2002). Thus, the concept *ILLEGAL* may be primed by the word *immigrant* owing to the frequency with which the words *illegal* and *immigrant* co-occur with one another. Collocates observed by Gabrialetos and Baker (2008) fell into a limited number of semantic categories suggesting a small set of topics or themes commonly associated with RASIM, the majority of which are indexical of a negative stance. Common themes included entry, provenance/destination/transit, economic problem, legality and return/repatriation. The most common theme was number with one in five uses of *refugees* and *asylum seekers* being accompanied by some form of quantification. Three lemmas that featured as collocates of *refugees* and *asylum seekers* to encode quantity information were *FLOOD*, *POUR* and *STREAM*, which in this context provide a metaphorical framing of migrants as an excessive quantity of water. Interestingly, in their corpus, the term *migrant* did not register any quantity collocates.

Media discourses of migration are found to rely extensively on metaphorical themes to frame refugees and migrants as dangerous, different and undesirable, though it should be noted that the frequency and evaluative functions of metaphors for migration fluctuate over time (Taylor, 2021). Human migration is framed as a natural disaster through water metaphors which describe refugees and migrants in

terms of ‘floods’, ‘tidal waves’ and even ‘tsunamis’ (El Refaie, 2001; Santa Ana, 2002; Charteris-Black, 2006; Abid et al., 2017; Dolores Porto, 2022). Refugees and migrants are dehumanized through metaphors which compare them to animals or infectious diseases (Santa Ana, 1999; Cisneros, 2008; Musolff, 2015). And they are constructed as an aggressive enemy through militarizing metaphors which describe them as an ‘invading force’ (El Refaie, 2001; Hart, 2021). Metaphors matter as they achieve cognitive framing effects (Robins and Mayer, 2000). For example, people are more negatively disposed to immigration when it is presented as a ‘flood’ or ‘invasion’ compared to more positive or neutral metaphors (Chkhaidze et al., 2021). Inundation metaphors (in which immigration is described in terms of *floods*, *waves* and *tides*) are shown specifically to increase support for policy measures designed to prevent immigration, such as the construction of a border wall (Jimenez et al., 2021), while dehumanizing metaphors are shown to elicit feelings of disgust and anger and similarly increase support for hostile immigration policies (Marshall and Shapiro, 2018; Utych, 2018).

News texts are inherently multimodal containing visual as well as verbal elements (Caple and Knox, 2015; Cheema et al., 2023) and there is now increasing interest in the visual and multimodal representation of refugees and migrants in online and print news media (Martínez Lirola, 2016, 2022; Martínez Lirola and Zammit, 2017; Wilmott, 2017; Farris and Silber Mohamed, 2018; Catalano and Musolff, 2019; Romano and Dolores Porto, 2021). Many of the themes presented verbally in media discourses of immigration are repeated visually in images such as news photographs. For example, refugees and migrants tend to be shown in large groups rather than small groups (Martínez Lirola, 2016; Wilmott, 2017), in dehumanizing contexts (Martínez Lirola, 2022), or in contexts of crime/security (Martínez Lirola, 2016; Wilmott, 2017; Farris and Silber Mohamed, 2018; Catalano and Musolff, 2019). In connection with provenance/destination/transit, refugees and migrants are typically shown somewhere along the way in their migratory journey (transit or *PATH*) rather than in destination countries (destination or *GOAL*) or in the places from which they originate (provenance or *SOURCE*) (Romano and Dolores Porto, 2021).

Images are particularly important in news communication. Eye-tracking studies show that images are among the first entry-points to a news text and that they receive a disproportionate amount of attention from readers (Bucher and Schumacher, 2006; Quinn et al., 2007; Holsanova and Nord, 2010; Leckner, 2012). When presented in the news, images are shown to enhance recall (Graber, 1990), to affect evaluations of social actions and social actors (Arpan et al., 2006), and to influence behavioral intentions (Powell et al., 2015; Geise et al., 2021). They are particularly important in shaping public attitudes and opinions with respect to immigration (Azevedo et al., 2021; Madrigal and Soroka, 2023). For example, Madrigal and Soroka (2023) show that among people who are high in general threat sensitivity, anti-immigration attitudes are mitigated by images of individual migrants but not images of groups of migrants. Similarly, Azevedo et al. (2021) show that exposure to images depicting refugees in large faceless groups results in increased implicit dehumanization (based on attributions of secondary emotions) compared to images depicting refugees in small groups. Images of large groups also lead to increased support for anti-refugee policies and decreased support for pro-refugee policies (Azevedo et al., 2021). Azevedo et al. (2021) further show the significance of narrative context where images of large groups at sea

compared to on land result in even greater dehumanization. Azevedo et al. (2021) (p. 14) conclude that “the decision of *what* is made visible and *how* [in news images] has consequences for the ways in which we perceive and relate to other human beings, especially in a culture that is powered by images at unprecedented levels.”

Digital social media platforms might be expected to provide a space in which counter-hegemonic discourses can develop (Fozdar and Pedersen, 2013). However, discourses articulated in social media settings are shown to echo those advanced by traditional media outlets and in fact to present more extreme and polemical versions of already hostile discourses (Musolff, 2015; Ekman, 2019; Walsh, 2023). This suggests that legacy media retain a central role in setting political agendas (Nielsen and Schröder, 2014; Langer and Gruber, 2021). Among the legacy media, it is television that is the most significant platform (Schröder and Kobbernagel, 2010; Ppathanassopoulos et al., 2013; Nielsen and Schröder, 2014). For example, based on a survey of ten countries, including the UK and the USA, Nielsen and Schröder (2014) show that people not only consult television news more often than they do news provided by social and other legacy media but that they consider television to be the most important source of news. Despite the key role of television in news communication, there are very few studies investigating the representation of refugees and migrants in TV news media. This is perhaps owing to the difficulties associated with gathering televisual data (Mistiaen, 2019: 57). Those that are to be found are either focused exclusively on language, where both corpus (Mistiaen, 2019) and content (Jacobs et al., 2016) analyses show that immigration is associated with topics of conflict, crime, security and terrorism, or else are based on a very limited number of data points (e.g., López, 2020). The visual and multimodal representation of refugees and migrants in TV news remains an unaddressed issue, especially based on evidence from large-scale corpora.

Multimodal corpora do now exist and their availability has led to major revisions of linguistic theory, including the notion of *multimodal constructions* within cognitive linguistics (Steen and Turner, 2013; Kok and Cienki, 2016; Cienki, 2017; Ziem, 2017; Zima, 2017; Zima and Bergs, 2017; Uhrig, 2022; Lehmann, 2024). Goldberg (2006: 5) defines a construction as a “learned pairing of form with semantic or discourse functions” where forms include morphemes or words, idioms, and partially lexically filled as well as fully general phrasal patterns. A multimodal construction is a conventionalized form-meaning pairing whose form consists of representations belonging to more than one semiotic mode. Multimodal constructions are thus distinct from incidental co-occurrences (Lehmann, 2024). Multimodal constructions are abstractions that constitute part of speakers’ linguistic knowledge. They are both derived from and manifested in patterns of co-occurrence between verbal and non-verbal forms repeated across usage events.

Most of the research addressing multimodal constructions has been focused on gesture-speech combinations where a multimodal construction is defined as “a conventionalized pairing of a complex form that consists, at least, of a verbal element combined with a kinetic element” (Ziem, 2017: 5). An example would be imperfective grammatical forms which are shown to be regularly accompanied by gestures that are longer in duration, more complex, and unbounded, thus reflecting the event-internal perspective adopted in the progressive aspect (Duncan, 2002; Parrill et al., 2013; Denisova et al., 2018).

The question of when a multimodal form-meaning pairing achieves constructional status is a largely quantitative one where multimodal

forms that co-occur “recurrently” or with “sufficient frequency” can be considered instantiations of a multimodal construction (Zima and Bergs, 2017). However, there is no specific threshold that must be passed in order to count as a construction and we are better thinking in terms of degrees of entrenchment than a binary opposition between constructional and non-constructional status (Uhrig, 2022). For example, Zima (2017) shows that the construction [all the way from X PREP Y] occurs with a specific gestural form in 80% of cases while Uhrig (2022) shows that constructions involving throwing verbs (e.g., *fling*, *lob*) occur with a ‘throwing’ gesture on average 54% of the time.

Crucially, constructions may exist in the language at large or may be particular to specific genres and discourses (Antonopoulou and Nikiforidou, 2011; Groom, 2019). While the majority of research has been directed at verbal + kinetic multimodal constructions, visual and audiovisual correlates of linguistic forms have also been investigated, including specifically in news communication (Steen and Turner, 2013; Hart and Marmol Queralto, 2021). Steen and Turner (2013) show that TV news has standardized visual routines that are deployed as part of specific multimodal constructions. For example, when narrating a news event, the past-tense + proximal deictic construction (as in “was/were + now”) has a tendency to include a zooming in on the entity whose experiences are being recounted. The image in a verbal + visual multimodal construction is thus not a specific image but a schematic one which captures and defines the semiotic properties of its instantiations.

A similar notion developed in corpus linguistics is that of ‘collustrations’, which McGlashan (2021: 227) defines as “repeated co-occurrences between representations in linguistic and visual semiotic resources across numerous texts.” The difference between collustrations and multimodal constructions is that collustration describes a relationship between verbal and visual elements at the level of texts while multimodal construction refers to an entrenched structure in the minds of language users. Collustrations can thus be seen as the predictable outcome of multimodal constructions which, following a usage-based account, are at the same time derived from the collustrational behaviors of language and image. As with collocation, the visual component of a multimodal construction is likely to be evoked by its verbal counterpart even in cases where it is not itself co-instantiated. The images that regularly occur alongside verbal expressions are thus not only important contributors of meaning within the specific communicative events of which they are a part but the mental imagery they embody becomes a meaningful feature of the linguistic expressions themselves, independently of co-verbal images (Hart, 2016). Studying the visual correlates of verbal expressions in media discourses of migration can therefore shed crucial light not only on the visual and multimodal representation of refugees and migrants but on the visually derived connotations of verbal forms employed in their description.

## 2 Data and method

### 2.1 The NewsScape library

This study exploits the NewsScape Library,<sup>1</sup> a massive multimodal corpus of television news held jointly by the libraries of the University of California at Los Angeles and Case Western

<sup>1</sup> <http://newsscape.library.ucla.edu/>

Reserve University (Steen and Turner, 2013; Steen et al., 2018; Uhrig, 2018). The database is curated by and informs the research activities of the Distributed Little Red Hen Lab<sup>2</sup>. NewsScape has been recording major TV news programs broadcast predominantly in the United States since 2011. As of 2018, the database consists of 370,000 h of audiovisual news communication that is time-stamped and co-aligned with 3bn words of closed-caption text. This makes the corpus larger than both the British National Corpus (100 million words) and the Corpus of Contemporary American English (1 billion words). The closed captioning provides a transcription of the audio portion of the video material and is fully searchable via CQPWeb, a web-based corpus analysis system (Hardie, 2012). When searched for target utterances, CQPWeb returns 'hits' displayed in concordance lines together with a link to the time-stamped entry in the NewsScape Library. This enables the visual forms accompanying verbal expressions to be easily located, cataloged and counted and thus for relations of co-occurrence between verbal and visual forms to be established. The NewsScape Library has supported research investigating the multimodal representation of time (Valenzuela et al., 2020), grammatical aspect (Hinnell, 2018) and number (Alcaez-Carrión et al., 2022). This study is the first to use the corpus to systematically analyze multimodal communication around a specific social topic.

## 2.2 Data collection

Since motion is an inherent aspect of the migratory process with motion events having high news value and being especially sensitive to ideological construal in media communication (Hart, 2024), the analysis focused on verbs of motion. It also focused specifically on expressions of self-activated motion rather than caused motion to consider the agentive processes ascribed to refugees/migrants.

The corpus was searched for four constructions in which motion verbs feature: [refugees have VERBed]/[\*migrants have VERBed]/[refugees are VERBing]/[\*migrants are VERBing].<sup>3</sup> The four constructions cross referential nominal (*refugees* vs. (*im*) *migrants*) with grammatical aspect (perfective vs. imperfective). This was motivated by previous research showing that the categories denoted by *refugee* and (*im*) *migrant* are constructed differently in media discourses where they have distinct sets of verbal collocates (Gabrialeto and Baker, 2008). We may therefore expect to find differences in the images associated with refugees versus migrants.

<sup>2</sup> <https://www.redhenlab.org/>

<sup>3</sup> In the search query syntax of CQPWeb, an asterisk allows optional tokens which in this case will return hits for both *migrants* and *im+migrants*. Throughout the paper, I use the less technical form (*im*) *migrants* when referring to the search query. When referring to the people designated by these forms, I use the more generic term *migrants*. Although technically *migrants* can refer to both emigrants and immigrants, the term *migrants* was included in the search because it is frequently and conventionally used in reference to immigrants rather than emigrants, for whom other terms like *expats* are used instead. Other potential terms like *aliens*, *invaders* etc. were not included because of their already inherently pejorative status.

Likewise, perfective versus imperfective aspects are shown to encode event-external versus event-internal perspectives, respectively, with correlates in co-verbal forms (Duncan, 2002; Parrill et al., 2013; Denisova et al., 2018) and consequences for legal and political judgments (Fausey and Matlock, 2011; Sherrill et al., 2015).

Frequency lists for the verbs occurring in each construction were generated. Motion verbs featuring in the top twenty of each list were then totaled with the six overall most frequent motion verbs being selected for analysis. The six motion verbs were *flee*, *flood*, *pour*, *enter*, *arrive* and *cross* which returned a total of 729 hits.

The data was then filtered to remove any cases that could be considered noise. 126 clips were excluded for one of the following reasons: they were duplicate clips; they involved a double nominal (e.g., *refugees and migrants have VERBed*); there was a mismatch between the construction in the closed caption and the one in the actual video clip; the clip belonged to an alternative genre than TV news; there was a misalignment between the closed caption and the time-stamp in the clip resulting in a false hit or the link to the clip was broken; the clip contained a multi-image (more than two) or montage of images or the image in the clip was unclear. Of the remaining 603 clips, 78.6% included images co-timed with the target phrase resulting in a final sample of 474 clips. By images here I mean any embedded visual that is on screen at the moment the target phrase is produced. This includes photographs and graphic illustrations within the TV studio setting (e.g., on a screen behind the news reporter) and video footage of scenes outside of the studio setting which the camera cuts to. In the case of videos, the unit of analysis is the frame coinciding with the verb as the nucleus of the construction and the sequence surrounding it.

## 2.3 Data characterization

Table 1 shows a breakdown of the data by referential nominal, grammatical aspect and verb. The most frequent verb in each construction is shown in bold. The term *refugee* occurs more frequently than (*im*) *migrant* accounting for 69.6% of all cases. The most frequent verb in the data is *flee* ( $n=164$ ) which occurs significantly more frequently with *refugee* than it does with (*im*) *migrant* ( $\chi^2=44.6405$ ,  $p<0.001$ ). *Arrive* is the second most frequent verb ( $n=116$ ) followed by *cross* ( $n=87$ ), *flood* ( $n=40$ ), *enter* ( $n=34$ ) and *pour* ( $n=33$ ). There are almost twice as many instances of the perfective construction ( $n=306$ ) as there are the imperfective ( $n=168$ ) with no marked difference in frequency of use between referential nominals. Images are categorized as still photographs, videos or graphic illustrations. Videos are the most frequent image-type ( $n=323$ ) accounting for 67% of all visuals. Photographs are the second most frequent ( $n=105$ ) followed by graphic illustrations ( $n=54$ ). Note that eight images were split images and were therefore coded twice.

The NewsScape Library ingests material from national and cable television networks in the US as well as international sources including the BBC. Figure 1 shows the distribution of hits by the major media outlets represented in the data. The top half of the most represented sources includes Aljazeera, KCET, CNN, FOX, CBS and BBC which together account for 63.9% of all hits returned.



## 2.4 Data coding

Motivated by previous research investigating the visual representation of migration, co-verbal images in the final sample were coded according to the following scheme:

- *Presence*: are refugees/migrants depicted in the image or not
- *Size*: are depicted refugees/migrants shown in small groups (<8 people) or large groups (>8 people)
- *Source-path-goal*: does the image include a concrete depiction of the country of origin (source), the migratory journey itself (path) or the ultimate destination country (goal)
- *Path*: if shown on the migratory journey, are refugees/migrants depicted in transit or *in situ* (e.g., in camps, held at borders, resting)
- *Mode*: if shown in transit, are refugees/migrants depicted on land or at sea
- *Security*: does the image present a security context (e.g., presence of security walls or fences, police, or military personnel)
- *Number*: are numbers displayed visually as part of the image

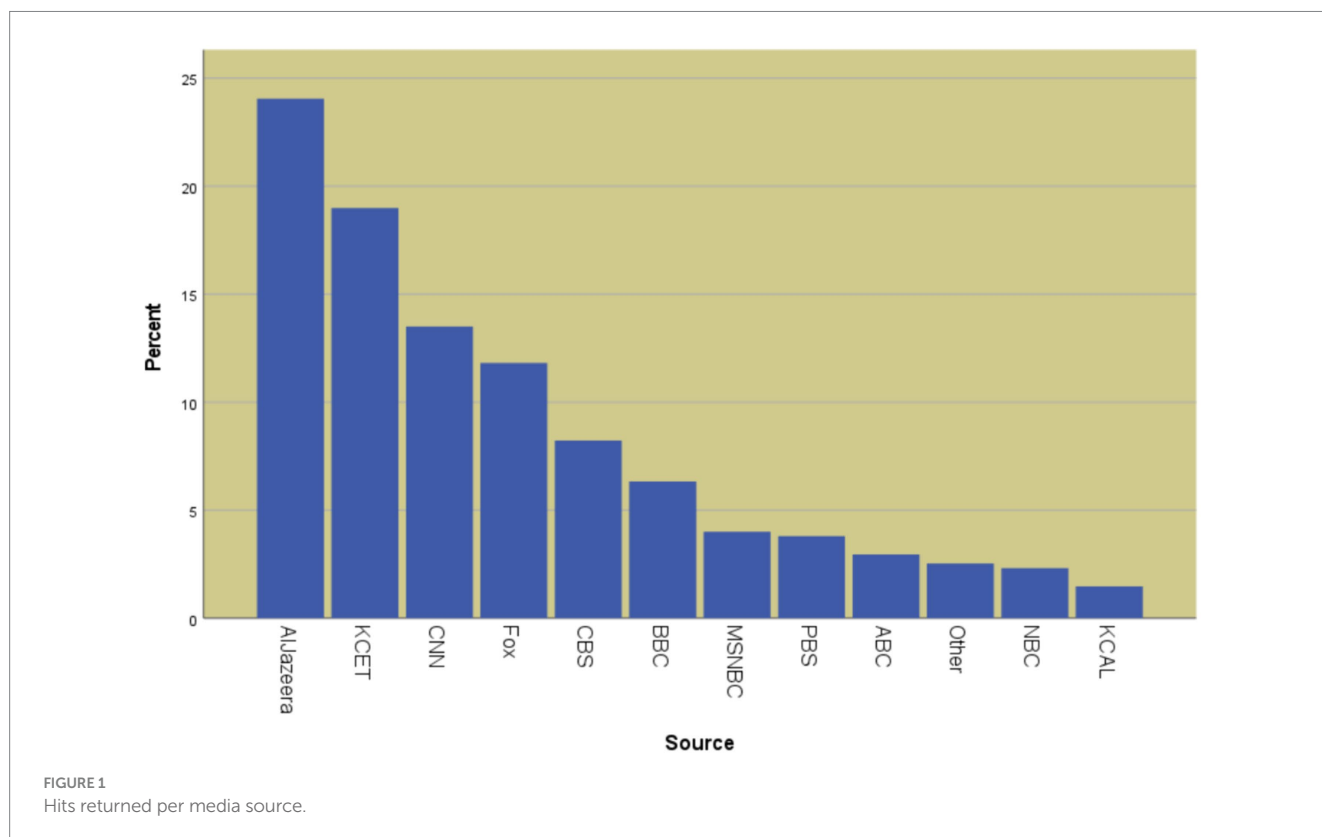
A randomized 20 % of the data was coded by a second non-expert coder (excluding the variable number which emerged as relevant only later in the analysis). A non-expert coder was used to ensure interpretive alignment between the analyst and a lay audience thus enhancing the ecological validity of the study. An overall kappa score of 0.673 indicates a substantial level of agreement between coders. However, it is worth noting some variation between the six second-coded variables which ranged from moderate to almost perfect levels of agreement: presence (0.825), size (0.743), source-path-goal (0.596), path (0.507), mode (0.807)

and security (0.558). Discussion with the second-coder identified some misunderstandings of the coding scheme for lower scoring variables. For

TABLE 1 Frequency of verb x aspect x nominal in data.

Refugee (330)	perfective (211)	Arrive (44) Cross (40) Enter (14) <b>Flee (94)</b> Flood (11) Pour (8)
	imperfective (119)	Arrive (21) Cross (10) Enter (4) <b>Flee (52)</b> Flood (17) Pour (15)
*migrant (144)	perfective (95)	<b>Arrive (45)</b> Cross (26) Enter (12) Flee (3) Flood (5) Pour (4)
	imperfective (49)	Arrive (6) Cross (11) Enter (4) <b>Flee (15)</b> Flood (7) Pour (6)

Bold indicates most frequent verb for each construction.



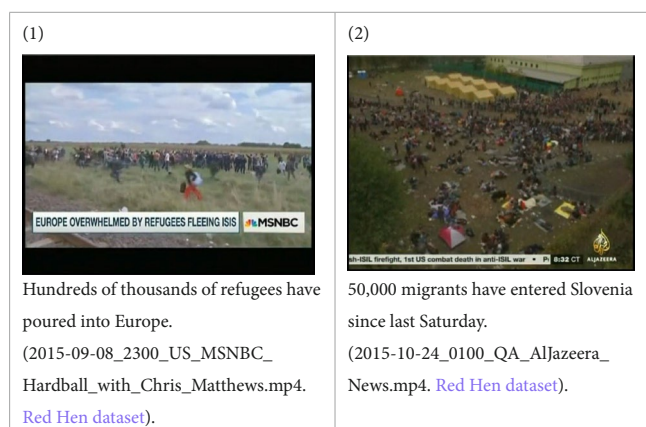
example, images of destination countries that did not also feature refugees/migrants were not coded as goal images. All issues were clarified to the satisfaction of the second coder before proceeding to the analysis with the original coding.

## 3 Results and discussion

### 3.1 Size

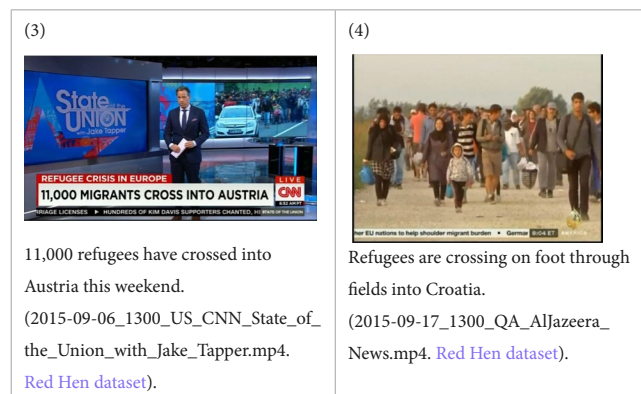
Refugees and migrants receive concrete visual representation in 74.3% of images ( $n=352$ ). Images showing refugees and migrants were classified as depicting small versus large groups of people. Following Azevedo et al. (2021), small groups were defined as groups comprising fewer than eight people whose facial features were clearly recognizable. Large groups were defined as those of eight or more people whose facial features could not be easily discerned. Consistent with previous findings for online and print news media (Martínez Lirola, 2016; Wilmott, 2017), refugees and migrants are depicted more often in large groups (60.5%) than small groups (39.5%). An exact binomial test confirms that this difference is statistically significant assuming 0.5 proportions ( $p < 0.001$ ). As shown in Figure 2, the result applies to both nominal categories. It is also the case regardless of grammatical aspect or verb and goes for all media sources.

Viewpoint was not included as a variable in the initial data coding owing to its complex dimensionality (Hart, 2015) as well as its dynamicity in video images. However, the visual depiction of large groups is often concomitant with a distal viewpoint, which may either be from on the ground as in (1) or aerial as in (2). Van Leeuwen (2005: 138) argues that “in pictures, distance becomes symbolic” where it “indicates the closeness, literally and figuratively, of our relationships.” The long-distance shot presented by examples like (1) and (2), as Wilmott (2017: 74) points out, “creates distance between the refugees and the viewer and highlights their ‘otherness.’” Long-distance shots of large and faceless groups, moreover, serve to de-individualize and anonymize refugees and migrants making it easier to ignore their individual motives for migrating and to accept actions and policies that will be harmful to them.

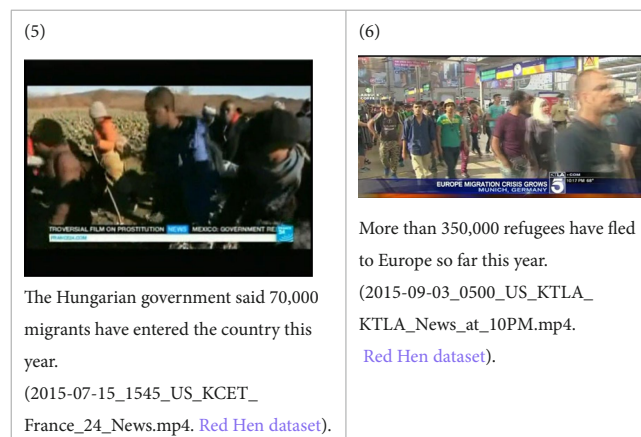


A particularly common pattern of visual representation shows refugees/migrants in large groups moving on foot in line formation as in (3) and (4). In such images, refugees and migrants are unitized as a single moving mass. The image is consistent with imagery evoked by both bovine metaphors, which ascribe herd-like qualities to refugees/migrants, and water metaphors, which liken them to a mass of water such as a river.

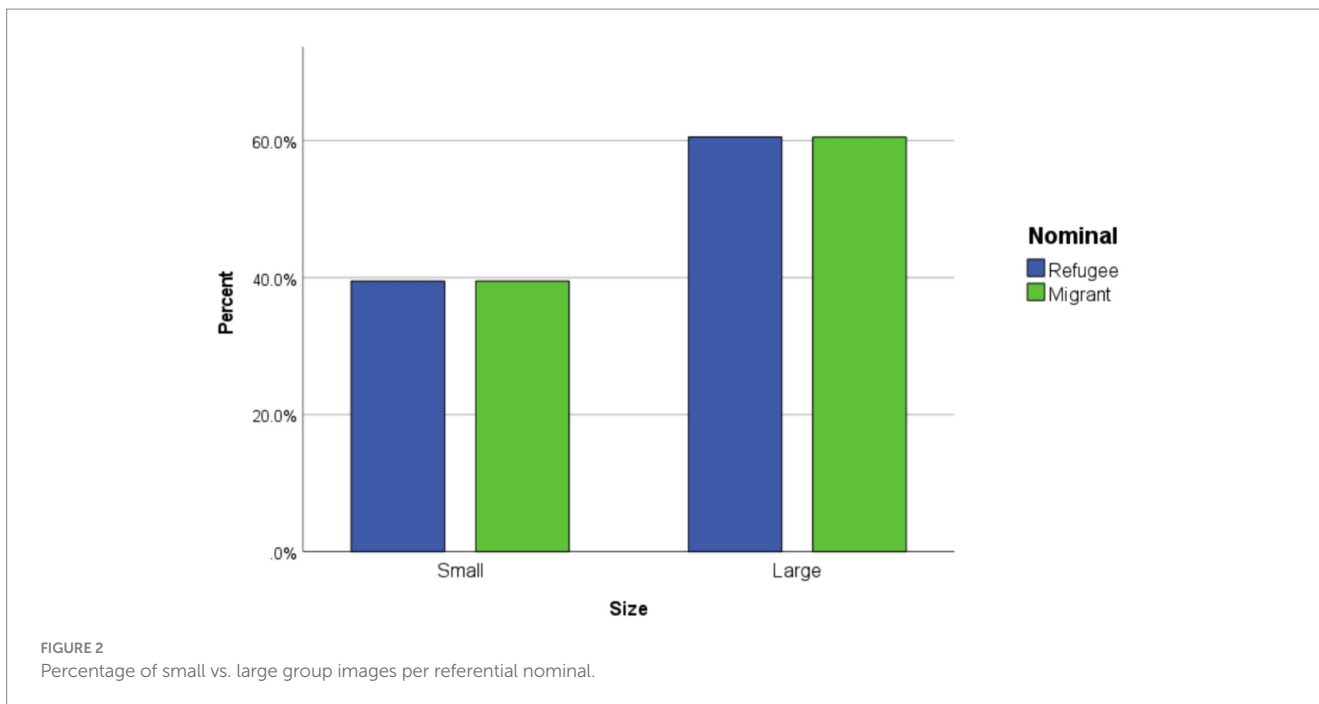
Angle is another ideologically significant dimension of viewpoint (Kress and van Leeuwen, 2006). The frontal angle presented by (3) and (4) realizes a visual proximization strategy (Cap, 2013) as the mass is shown moving toward the viewer thus creating the sense of an impending threat or problem.







A closely related pattern, seen in (5) and (6), involves a large unbounded line of refugees/migrants moving continuously past the viewer so that at every stage in the sequence the viewing frame is occupied by new people. The images in (5) and (6) thus present an event-internal perspective with neither the beginning nor the endpoint of the line included in the sequence. In such examples, perspective and state of boundedness work together to imply a current, enduring and indefinite situation.



Large groups are also shown in scenes of chaos as in (7) and (8) with the extreme close-up shot in (8) placing the viewer in the midst of the chaos. By contrast, when small groups are depicted, they are shown in calmer situations, including medical contexts as in (9) or just waiting/resting as in (10). Small group depictions identify refugees and migrants as individuals and thus recognize their personal plight. Where women and children are underrepresented in visual discourses of migration with the default image being of large male groups (Banks, 2012; Martínez Lirola and Zammit, 2017; Olier and Spadavecchia, 2022), small groups are often specifically identifiable as a family that includes women and young children as in (10). Small group depictions tend to coincide with a more close-up shot which in this context connotes familiarity as opposed to otherness.



<p>(7)</p>  <p>The refugees are pouring into Europe. (2015-09-13_1800_US_MSNBC_Meet_the_Press.mp4. Red Hen dataset).</p>	<p>(8)</p>  <p>Those refugees are fleeing terror and civil war in the Middle East. (2015-09-10_2300_US_FOX-News_On_the_Record_with_Greta_Van_Susteren.mp4. Red Hen dataset).</p>
<p>(9)</p>  <p>Where thousands of refugees are pouring in desperate for help. (2013-09-06_2100_US_CNN_Situation_Room.mp4. Red Hen dataset).</p>	<p>(10)</p>  <p>Millions of refugees are fleeing the horrors of war. (2016-09-30_1400_US_KCET_Democracy_Now.mp4. Red Hen dataset).</p>

### 3.2 Source-path-goal

The translocational process of migration involves three conceptual locations: (i) a source as the country of origin; (ii) a path as the series of locations along the migratory journey including camps, borders and resting places; and (iii) a goal as the ultimate destination country. Images window attention on particular stages of this process (Hart and Marmol Queraltó, 2021; Romano and Dolores Porto, 2021). As shown in Figure 3, in images where a concrete physical location is clearly represented and identifiable ( $n = 398$ ) this is more frequently a path location (81.4%) than it is a source (10.3%) or goal (8.3%) location. The result is statistically significant based on an exact binomial test assuming equal distributions ( $p < 0.001$ ). These results mirror findings for online newspapers (Romano and Dolores Porto, 2021) and confirm the media’s interest in the middle stage of the migration process. The focus on path locations as in examples (1) to (10) fails to draw attention to the circumstances that lead to displacement, such as poverty, violence and war.

An example depicting a source location is provided by (11) which in the background shows the destruction to buildings caused by the war in Syria. Worth noting is that in 95.1% of cases where a source location is shown, this is in connection with the nominal ‘refugee’ rather than ‘(im)migrant’ ( $\chi^2 = 16.087$ ,  $p < 0.001$ ). Similarly, and expectedly given the association between *refugee* and *flee*, source depiction also occurs significantly more frequently with ‘flee’ (70.7%) than it does with any other verb ( $\chi^2 = 34.847$ ,  $p < 0.001$ ). Since *flee* inherently implies an unsafe or dangerous situation from which someone removes themselves, this indicates a slightly greater willingness to tell the backstory, in multimodal form, of people designated as ‘refugees’ compared to those designated as ‘(im)migrants’.

Size matters because people express greater empathy and willingness to help in situations involving specific individuals than those involving larger, vaguer groups, a phenomenon known as the *identifiable victim effect* (Jenni and Lowenstein, 1997; Lee and Hugh Feeley, 2016). By contrast, it is argued that images showing people in large groups lead to decreased perceptions of vulnerability (Bleiker et al., 2013) and psychic numbing effects (Slovic, 2007). Azevedo et al. (2021) show that large group depictions produce dehumanizing effects where refugees/migrants shown in large groups are judged as less capable of experiencing human emotions like tenderness, guilt and compassion.

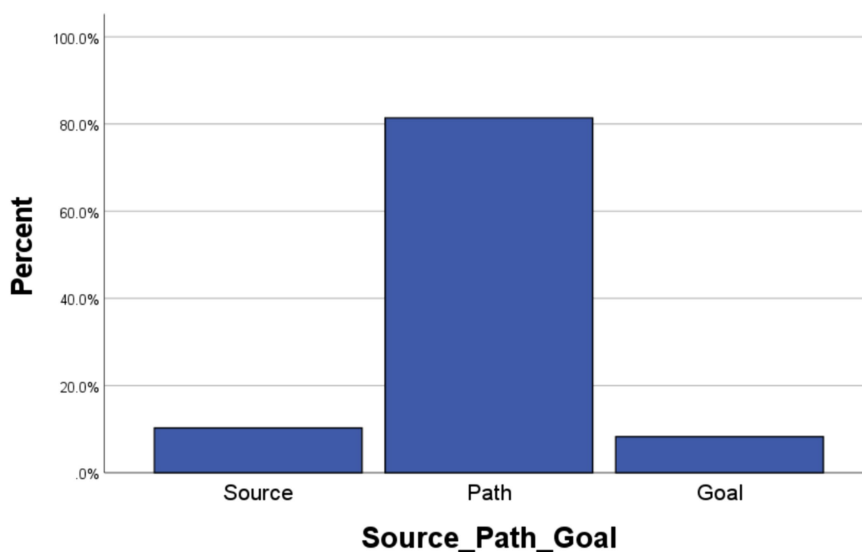


FIGURE 3  
Percentage of source vs. path vs. goal images.

(11)



Hundreds of Syrian refugees have crossed the border into Turkey.  
(2015-06-11\_2200\_QA\_AlJazeera\_News.mp4. Red Hen dataset).

The focus on path locations equally fails to show refugees and migrants settled into a new life in the destination country, which would present a positive immigration story. Indeed, when the destination country is shown ( $n = 33$ ), refugees and migrants are not part of the picture in 48.5% of cases. Images instead show either a cityscape or landscape in an anchored news report (36.4%) as in (12) or the aftermath of terrorism (12.1%) as in (13) where it is implied that immigration is to blame for terrorist attacks.

Where the perfective construction describes an event as having completed and the imperfective construction describes an event as ongoing, perfective and imperfective aspect might have been expected to correlate with goal and path images respectively. However, this was not the case ( $\chi^2 = 2.420, p = 0.298 ns$ ). This could be owing to the low number of goal images failing to reliably show any correlations. However, another possible explanation is that the two semiotic modes are functioning differently. While perfective aspect in the verbal mode presents a specific event as having completed, the visual mode serves to frame the event as part of a more general situation that continues to endure.

Depicted on the migratory journey, refugees and migrants are represented more frequently in transit (70.7%) than they are *in situ* (20.3%) ( $p < 0.001$ ). That is, they are shown on the move more than they are shown resting, in camps or being held at borders.

As shown in Figure 4, they are depicted in land-based transit (i.e., on foot, on buses or on trains) (71.6%) more frequently than sea-based transit with ‘refugees’ being particularly strongly associated with land-based modes ( $\chi^2 = 18.503, p < 0.001$ ). The main result is significant based on an exact binomial test ( $p < 0.001$ ). Nevertheless, images of refugees and migrants at sea as in (14) and (15) account for 28.4% of path images.

(12)



Just over 300 Syrian refugees have arrived in New Jersey in the last year.  
(2016-11-08\_0200\_US\_KOCE\_The\_PBS\_Newshour.mp4. Red Hen dataset).

(13)



And its all because millions of refugees have fled the Middle East.  
(2016-07-23\_0000\_US\_FOX-News\_The\_OReilly\_Factor.mp4. Red Hen dataset).

(14)



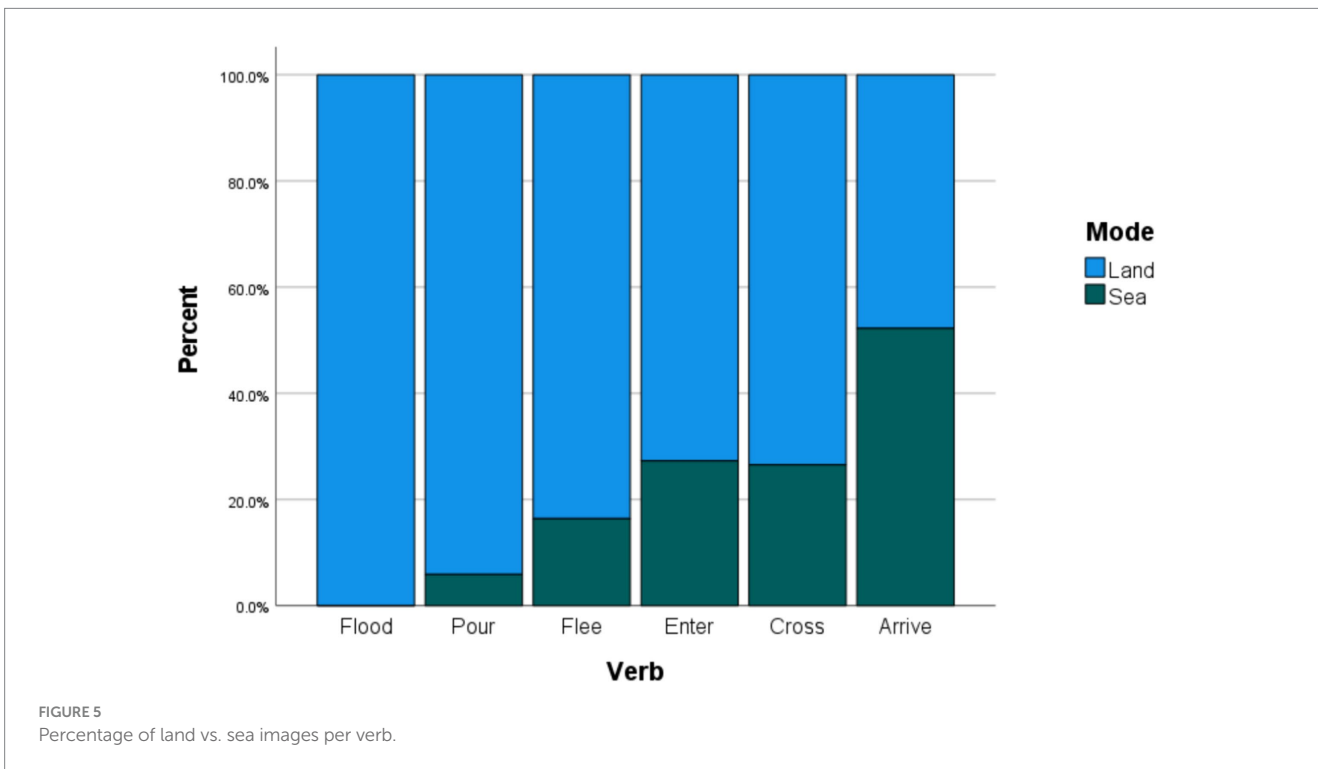
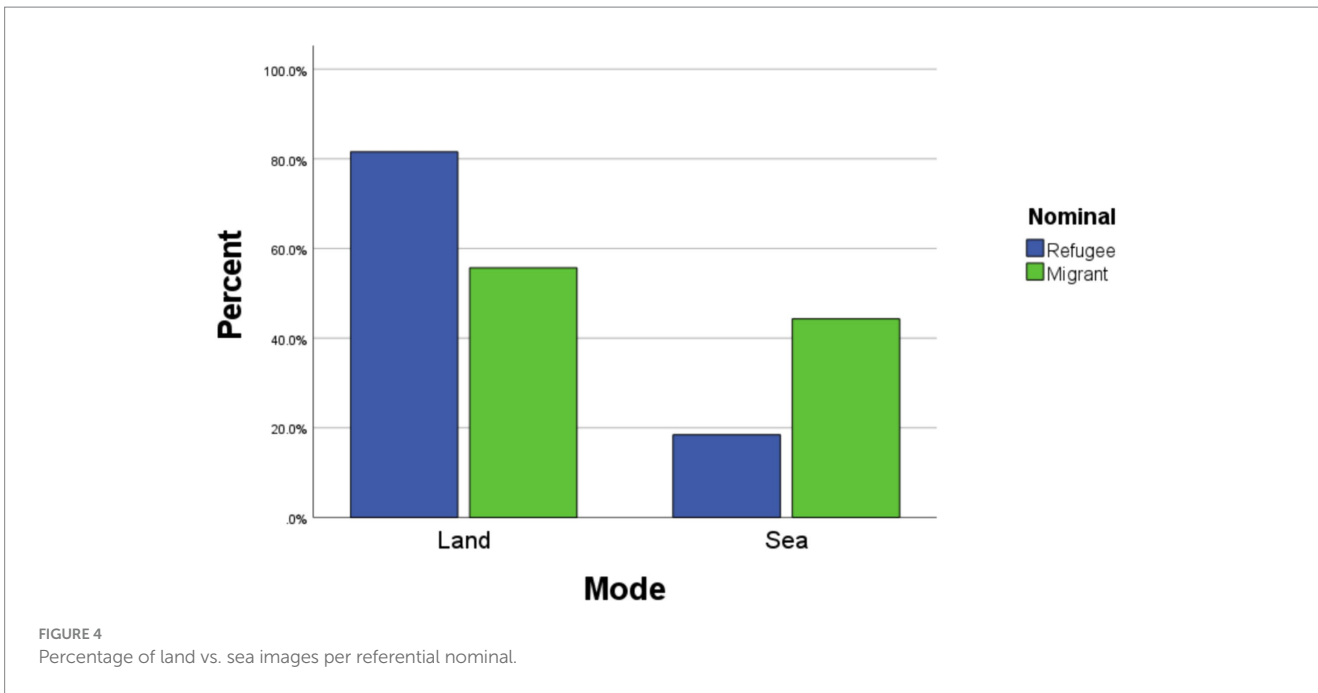
More than 40,000 illegal migrants have arrived in Europe already this year.  
(2014-05-31\_0100\_UK\_KCET\_BBC\_World\_News.mp4. Red Hen dataset).

(15)



In the first six months of this year nearly 9,000 migrants have arrived in Italy and Malta.  
(2013-10-04\_0000\_UK\_KCET\_BBC\_World\_News.mp4. Red Hen dataset).







Azevedo et al. (2021) show that seeing large groups in a sea context further amplifies dehumanization effects. Sea-based images also increase perceptions of realistic threat (i.e., threat to the in-group’s economic or political power or physical well-being) while land-based images increase perceptions of symbolic threat (i.e., threat to the in-group’s norms, values and culture) (Azevedo et al., 2021). Images of refugees and migrants arriving by sea at night as in (15) in particular contribute a sense of clandestinity and illegality (Martínez Lirola, 2022: 488).

Sea images might be expected to occur most frequently with verbs *flood* and *pour* which provide a water-based metaphorical framing of migration (El Refaie, 2001; Santa Ana, 2002; Charteris-Black, 2006; Abid et al., 2017; Dolores Porto, 2022). Language and image would then be intersemiotically convergent (Hart and Marmol Queraltó, 2021) in indexing the semantic element of water in each mode. In fact, however, water-related verbs *flood* and *pour* are the least associated with sea images, with *flood* (n=13) occurring exclusively with land images and *pour* (n=17) occurring with land

images in 94% of cases (see Figure 5). It is in the context of *arrive* ( $n=67$ ) where sea images occur most frequently (52.3%) ( $\chi^2=32.553$ ,  $p<0.001$ ). One explanation for this is in terms of functional redundancy. Since land and sea images connote different types of threat, there is a rhetorical payoff in evoking water and land-based imagery simultaneously in distinct modes but a redundancy in providing the same information twice. An alternative reason why water verb + sea image combinations are not found may be that the presence of literal water in sea images, rather than strengthening the water-based framing presented in the verbal mode, would in fact defeat the figurative evocation of the frame. In either case, the result shows that in multimodal texts representations in different modes are not just reduplications of one another but rather modes contribute distinct information and interact with one another in various ways to create meanings that are complex and multi-layered (Kress and van Leeuwen, 2006).



When shown *in situ*, refugees and migrants are depicted as passive and devoid of agency as in (9) and (16) and (17) below where the high camera angle in (16) and (17) further contributes to a sense of disempowerment (Kress and van Leeuwen, 2006).

<p>(16)</p>  <p>The international organisation for migration says more than 26,000 migrants have crossed the Mediterranean so far this year. (16_0100_QA_AlJazeera_News.mp4. Red Hen dataset).</p>	<p>(17)</p>  <p>An estimated 300,000 refugees have poured into the region in recent days. (2014-06-22_1058_US_WOIO_Action_News_Sunday_Morning.mp4. Red Hen dataset).</p>
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In (16), the refugees/migrants are subjugated suggesting the right of more powerful actors to determine their freedom and autonomy. The images in (9) and (17) invite pity and thus contribute to what Chouliaraki (2006) calls a *spectatorship of suffering* where “simply watching the scene of suffering objectifies the distant misfortune and, as a consequence, may lead to dehumanizing the sufferer” (p.92). This occurs where the suffering is aestheticized and presented as itself a spectacle to behold. As Chouliaraki states, aestheticized suffering “seems to rest on the spectator’s indulgent contemplation of the spectacularity of the scene of human pain” (Chouliaraki, 2006).

### 3.3 Securitization

One fifth of all images in the corpus ( $n=92$ ) depict security contexts, defined by the presence of border walls or fences, police, or military personnel. In such contexts, refugees and migrants are shown either subjugated as in (18) or breaching security measures as in (19).

<p>(18)</p>  <p>So far this year 80,000 migrants have crossed into Hungary. (2015-08-05_0100_US_KOCE_The_PBS_Newshour.mp4. Red Hen dataset).</p>	<p>(19)</p>  <p>More illegal immigrants are crossing the US border. (2013-10-11_1600_US_FOX-News_Happening_Now.mp4. Red Hen dataset).</p>
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Images like (19) instantiate a force-dynamic conceptualization in which refugees/migrants are an agonist attempting to overcome a protective barrier in the form of a wall or fence (Dancygier and Vandelanotte, 2017; Hart and Marmol Queralto, 2021). Images of walls and fences are a recurrent visual trope in media discourses of migration (Martínez Lirola, 2016, 2022) where they reinforce a view of refugees and migrants as a dangerous and alien other that exists beyond the wall and who are engaged permanently in an effort to overcome the protective barrier that it provides. As Jones (2012: 25) states, walls and fences entail “a sharpening of discursive distinctions between the people and places on the inside and the evil, dehumanized, and disorderly others who are kept out. They materially and symbolically mark the margins of the exceptional, civilized world and protect it from the perceived anomie on the outside.”

An alternative representation is one where refugees and migrants are absent from the image as in (20) which shows only security officials awaiting their arrival and (13) above which claims to show the aftermath of their arrival.

<p>(20)</p>  <p>Hungary just closing its border with Serbia where thousands of migrants have poured over the border in the past few weeks. (2015-09-14_1700_US_MSNBC_MSNBC_Live_with_Thomas_Roberts.mp4. Red Hen dataset).</p>
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The presence of security elements serves to criminalize refugees and migrants (Martínez Lirola, 2016) and to construct immigration as a national threat. Images that depict security contexts therefore contribute to a securitization of immigration (Lazaridis and Wadia, 2015; Vezonik, 2018; Kataba and Jacobs, 2023). Immigration is not inherently a security issue but rather, as with other socio-political

issues, it becomes a security issue when it is labeled that way by a securitizing actor and when it is accepted as a security issue by a relevant audience (Buzan et al., 1998). Securitization is defined as a process where “through a speech act, the securitising actor labels something as an existential threat to the referent object and argues for the use of extraordinary measures to counter the threat” (Kataba and Jacobs, 2023: 1224). It is not only words that provide securitizing labels, however; images also have a securitizing capacity (Williams, 2003; Hansen, 2011). In immigration discourse, a securitization function is fulfilled by images that include a security presence. Such images are self-prophesying in so far as they serve to further justify the militarization of borders (Catalano and Musolf, 2019). Worth noting is that visual securitization occurs more when the nominal in the construction is *migrants* (30.6%) than when it is *refugees* (14.6%) ( $\chi^2 = 16.428, p < 0.001$ ), which suggests that when people are designated as refugees they are less likely to be considered a security threat than when they are designated as migrants. Also worth noting in the present data is that visual securitization varies significantly by source ( $\chi^2 = 22.008, p < 0.05$ ). For example, Fox News and KCAL images include a security element 35.7 and 42.9% of the time, respectively, while AlJazeera and BBC images include a security element in 13.2 and 3.3% of instances, respectively.



illustrations of battle plans in which similar arrows represent troop movements (Machin, 2007: 60). The image in (23) therefore draws intertextual and interdiscursive links with images in another domain to imply that immigration is like an invasion. This is consistent with verbal metaphors that regularly describe immigration in terms associated with war (Hart, 2021). A recurrent type of map, exemplified in (24), is a heat map. In heat maps, the color red is conventionally used to indicate high intensity and represent the ‘danger zone’. Thus, where specific areas are identified as hotspots, as in (24), it is implied that migration coming from those areas presents a danger.

### 3.4 Erasure

The term “erasure” is used widely in social science contexts to describe the way texts systematically ignore, sideline or otherwise direct attention away from certain groups of people to deny their existence and/or their lived experiences (Namaste, 2000; Stibbe, 2015). In approximately one quarter of images ( $n = 122$ ), refugees and migrants are omitted from the picture. That is, they are not themselves visually depicted. This erasure occurs through various patterns of representation that include anchored news reports showing locations only as in (12), images showing politicians talking about refugees and migrants as in (21) and visual metonymies (Catalano and Waugh, 2013) in which a vehicle, such as a bus or train, stands in for the people it is transporting as in (22).

<p>(23)</p>  <p>Estimates now show that hundreds of thousands of migrants have flooded into Europe.</p> <p>(2015-09-02_1900_US_FOX-News_Shephard_Smith_Reporting.mp4. Red Hen dataset).</p>	<p>(24)</p>  <p>More than two and a half million refugees have fled Syria.</p> <p>(2014-04-04_0100_UK_KCET_BBC_World_News.mp4. Red Hen dataset).</p>
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A final form of erasure occurs in images which serve to maintain fear of a mysterious other as in (25) and (26). (25) Presents a further example of visual metonymy where refugees and migrants are represented metonymically through the image of a passport. The passport photo, however, rather than being identifying of a person through human facial features, presents an anonymous and shadowy figure. In (26), refugees and migrants are similarly stripped of human features and represented in silhouette form where they are explicitly constructed as a danger by being framed within a road sign expressing warning. Unlike a conventional road sign, however, where it is the reader of the sign who presents a danger to others and is instructed to take precautions to ensure their safety, the road sign in (26) warns of the danger presented by others and instructs the reader to take precautions to ensure their own safety.

<p>(21)</p>  <p>Over 500,000 Syrian refugees have fled the civil war into Jordan.</p> <p>(2013-05-09_0900_US_CNN_Early_Start.mp4. Red Hen dataset).</p>	<p>(22)</p>  <p>We have learned that some undocumented immigrants have arrived in Southern California.</p> <p>(2014-07-05_0600_US_KABC_KABC_7_News_at_11PM.mp4. Red Hen dataset).</p>
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<p>(25)</p>  <p>More than a million refugees have arrived in Germany over the past year.</p> <p>(2016-08-09_2300_FR_KCET_France_24.mp4. Red Hen dataset).</p>	<p>(26)</p>  <p>Illegal immigrants are pouring across the border.</p> <p>(2014-06-16_0600_US_MSNBC_Meet_the_Press.mp4. Red Hen dataset).</p>
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The most striking form of representation which serves to erase refugees and migrants, however, is the use of maps as in (23) and (24). In (23), the arrows represent the movement of people through different countries. However, the image is highly reminiscent of media

Van Leeuwen (2005: 110) notes that exclusion can have a “distorting effect.” For example, in all instances of erasure discussed above, the image overlooks human suffering and therefore makes it easier to accept or support inhumane circumstances or treatments. Stibbe (2015: 145) argues that the systematic absence of participants





communicates that those participants are unimportant, irrelevant or marginal. Chouliaraki (2006: 89) goes further to suggest that such semiotic choices annihilate the sufferers by depriving them of their corporeal and psychological qualities and removing them from the existential order to which the spectator belongs.

Visual erasure occurs significantly more often with the nominal *refugee* (29.7%) than it does with *(im)migrant* (16.7%) ( $\chi^2=8.906, p<0.01$ ). One explanation for this is that refugees are generally associated more with suffering than migrants. In a hostile media environment, there is therefore a greater need to erase refugees in order to avoid the depiction of suffering and the potential elicitation of sympathy. Conversely, since migrants are generally more associated with crime and economic opportunity there is less cause for their experiences to be erased.

### 3.5 Number

The final variable to consider is number. Media discourses of migration are pre-occupied with quantification (Gabrialeto and Baker, 2008). This is partly so that refugees and migrants can be presented as coming in numbers which appear large and are therefore alarming and partly because numbers and statistics are a conventional way of emphasizing objectivity and thus enhancing credibility (van Dijk, 2000; Koetsenruijter, 2011). There are different ways of reporting numbers, however. For example, Woodin et al. (2024) show that large numbers tend to get rounded more than small numbers, an observation supported by the present data where numbers are displayed in 7.4% of images ( $n=34$ ) and in 82.4% of cases those numbers are expressed as round numbers. The representational format of numbers is also consistent with previous findings which show that numbers in the range 10–999,999 tend to be denoted by numerals while numbers 1 million and above get represented more often in mixed format. In the present data, numbers under 1 million ( $n=28$ ) are exclusively presented as numerals as in (27) while numbers of 1 million or above ( $n=6$ ), as in (28), are presented in mixed format 83.3% of the time. A Fisher's exact test confirms that this difference is significant ( $p<0.001$ ).

<p>(27)</p>  <p>Half a million refugees have entered Europe this year. (2015-09-09_2200_QA_AlJazeera_News.mp4. Red Hen dataset).</p>	<p>(28)</p>  <p>More than four million refugees have fled Syria since the start of the civil war there in 2011. (2015-07-10_0130_US_KABC_World_News_Tonight_With_David_Muir.mp4. Red Hen dataset).</p>
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In all cases the same numerical information is co-expressed verbally supporting Winter and Marghetis' (2023: 2) claim that "for numerical communication, multimodality is the norm rather than the exception." There are various ways in which semiotic modes may interact with one another in numerical communication but one is "amplification" whereby the same core idea is expressed in multiple modes simultaneously (Winter and Marghetis, 2023). There are

several reasons why news producers may choose to *amplify* a numerical message. For example, as outlined by Winter and Marghetis (2023: 9), it enhances memorability where encoding information into memory via multiple formats leads to better recall, it appeals to the modality-specific attention and retention preferences of individual audience members so that the information is more likely to stick with more people, and it increases the chance that the information will be received by audiences via one mode or another.

## 4 Conclusion

TV news remains highly influential in the modern media landscape but constitutes an under-investigated area of communication research. This study is the first to conduct a systematic, large-scale investigation of multimodal meaning-making in TV news communication about migration. Such an investigation is made possible by innovations in multimodal corpus design and specifically the NewsScape corpus developed by the Distributed Little Red Hen Lab which this study exploits. The study investigated the co-verbal images that occur alongside the constructions [refugees/(im)migrants have VERBed] and [refugees/(im)migrants are VERBing] where the designation of the verb is a motion event. TV news is found to rely on some of the same patterns of visual representation that are relied on by online and print newspapers and which construct refugees and migrants as a problematic other or else realize a spectatorship of suffering.

The study extends the notion of multimodal constructions, which are defined as conventionalized form-meaning pairings involving complex forms belonging to more than one mode, to verbal + visual combinations rather than verbal + gestural combinations. No threshold for constructionhood was set. However, 78.6% of linguistic constructions in the initial search co-occurred with images suggesting the potential for these units to exist as genre- or discourse-specific *multimodal* constructions. Repeated patterns of visual representation in co-occurring images further support the multimodal constructional status of these units. The most common pattern of visual representation observed is one in which large groups of refugees or migrants are shown moving on foot over land. The visual component of these multimodal constructions can therefore be taken as comprising imagery abstracted minimally along these lines. Although viewpoint was not coded in the analysis, it nevertheless provides additional layers of meaning and is likely to figure as a semiotic element in the visual components of multimodal constructions. The role of viewpoint in verbal + visual multimodal constructions is therefore an interesting avenue for further research. Besides the default imagery encoded at a constructional level, other multimodal instantiations were also observed which construct immigration as a security issue or which serve to erase the experiences of refugees and migrants. Quantification was also shown to be realized multimodally.

Grammatical aspect did not correlate with any particular distinctions in visual representation suggesting similarities in the visual forms of each multimodal construction. There were, however, some subtle differences between constructions where the referential nominal is *refugee* compared to *(im)migrant*. While people designated as refugees and migrants were both depicted significantly more frequently in path locations than source or goal locations, those designated as refugees were more likely to be shown in source



locations than those designated as migrants. Similarly, while both categories of people were shown on land more than at sea, those designated as migrants were depicted at sea more often than those designated as refugees. People designated as migrants were also more likely to be shown in security contexts than people designated as refugees while people labeled as refugees were more likely to be erased than people labeled as migrants. While the categories *refugee* and *migrant* are largely treated the same way, subtle differences such as these suggest that the two denominations have slightly different frames or semantic profiles which are built by and manifested in co-occurring visual as well as verbal forms.

The study focused on motion events in TV news communication about migration, often identifying parallels with print and online news. Future research could look beyond motion events to explore other important dimensions of migration or beyond migration to investigate in TV news multimodal meaning-making with respect to other topical issues such as political protests. A limitation of the study is that it did not fully account for the affordances of the televisual medium to consider ways in which TV news differs from print and online news. Future research could account for the dynamic nature of TV news to consider, for example, the functions of shifting viewpoints in video images and how they interact with verbal forms or the way images such as graphs provide material anchors in the studio setting which presenters interact with verbally and gesturally in tri-modal acts of meaning-making. Similarly, sound is known to function ideologically (Machin, 2014) and may figure as a further, auditory component of multimodal constructions. Future research could therefore include sound as an ideologically significant semiotic mode. What is clear is that the NewsScape corpus and other TV news corpora now in existence offer rich and exciting opportunities for the systematic, multimodal analysis of TV news communication and there is much research in this area yet to be done.

## Data availability statement

The datasets presented in this article are not readily available and data cannot be shared publicly because the author does not own the

copyright of the news clips, which belongs to the Broadcasting corporations that own the shows. In compliance with US Copyright laws, access to these data can be provided to researchers who meet the appropriate criteria. Access can be applied for through the Red Hen Lab which administers the NewsScape corpus from where the data have been extracted. Requests to access the datasets should be directed to <https://www.redhenlab.org/>.

## Author contributions

CH: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Validation, Visualization, Writing – original draft, Writing – review & editing.

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The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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