

# Cis-heteronormative couples in Google Images. A multimodal critical discourse analysis

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## Abstract

Recent research has increasingly exposed the meaning-making potential of AI systems across a range of AI-coded platforms, particularly highlighting their tendency to reproduce deep-rooted gender- and sex-discrimination (cf. Bolukbasi et al. 2016; Noble 2018). While much of this work has focused on marginalised groups, the present study shifts attention to the normalised subjects of coupledness, i. e., cis-heteronormative couples, to examine how dominant ideologies are naturalised in the outputs of AI-based search engines. Adopting a Multimodal Critical Discourse Analysis approach, this study investigates how the visual and verbal modes combine in Google Images when querying the linguistically unmarked terms *couples* and *coppie* in the British and Italian digital landscapes respectively.

Findings reveal that Google Images' multimodal representation of cis-heteronormative couples aligns with socio-cultural norms entrenched in what is the Western basic default norm of conceiving coupledness. While specific patterns emerge in each digital landscape, both datasets reproduce neoliberal imaginaries of coupledness where idyllic relational success, self-optimisation and aestheticised desirability marginalise alternative couple forms and reinforce the monolithicity of cis-heteronormative coupledness.

By comparing data from two distinct cultural contexts, this study demonstrates the relevance of MCDA for uncovering how AI-based search engines visually and verbally reinforce dominant norms. While data reflect a specific socio-cultural and temporal snapshot of each digital landscape, the findings illustrate how Google Images systematically reproduces normative couple models across both the Italian and British contexts.

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## 1 Introduction

The perils of unregulated development of neural networks and deep learning, along with the first steps of the EU to approve the Artificial Intelligence (henceforth, AI) Act (cf. The EU Artificial Intelligence Act), contribute to maintaining attention to the potentially dangerous effects of biased AI architectures (cf. Tamburrini 2025). The current preoccupation on the operational (technology-derived; cf., *inter alia*, Badaloni/Lisi 2020) and cognitive (human-driven; cf., *inter alia*, Bolukbasi et al. 2016) limitations of ubiquitous AI models is further reinforced if we consider that data-driven algorithmic infrastructures reflect tech companies' profit-driven ideologies and mediate societal conceptions, communicative processes and people's opinions

on controversial topics (cf. Andersen 2018). At the same time, the role AI has come to play in societal meaning-making has gained prominence in the growing integration of different semi-otic modes (cf. Djonov/van Leeuwen 2018) and in the widespread adoption of computer technology to create and share knowledge on digital platforms (cf. Moschini/Sindoni 2022). Against this backdrop, meaning- and knowledge- making tends to be influenced, if not determined, by dominant, i. e., highly visible, algorithmic outputs (cf. Haider/Sundin 2019).

This ever increasing pervasiveness of AI models, together with the growing tendency to perceive algorithm performances as indisputable self-evidence (cf. Broussard 2019), has ignited discussion on ethical repercussions and on how sensitive topics such as ethnicity, financial status, gender and sex are stereotypically reflected in AI architecture and design (cf. Noble 2018; Bolukbasi et al. 2016). In this regard, the debate on gender fair AI models has gained momentum (cf. Yang et al. 2023), especially as regards the production, consumption and resemiotisation of multimodal artefacts for their high circulation and visibility in the cybersphere (cf. O'Halloran et al. 2011).

While this study does not engage with the current computational challenges of AI models in achieving gender diversity, it adopts a Multimodal Critical Discourse Analysis (MCDA, henceforth; cf., *inter alia*, Kress/van Leeuwen 1996/2020) perspective to examine how unmarked representations of coupledness are currently enacted in text- and image-based search results in Google Images (GI, henceforth), whose search processes are informed by AI models.

Studies with a MCDA orientation have recently focused on the meaning-making potential of AI systems in a variety of AI-coded platforms and devices. In relation to sex robots, Mykietiak (2020) highlights that although this technology adds physical and tactic dimensions to human-computer interaction, the algorithm still serves designers' preferences, (e. g., narcissism and dominant patriarchal ideologies) that can result in echo chambers for oppressive discourses due to the dominant/subservient binarism whereby the system is fed. By considering verbal and vocal resources of female intelligent voice assistants, Sindoni (2024) uncovers in-built gender stereotyping in such AI architectures. Her research reveals that gender-biased interface design intersects with AI developers' patriarchal views, perpetuating ideologies that bind women in subservience and may uphold misogyny, impoliteness and verbal harassment in human-to-human interactions. As for the combination of verbal and visual resources, Santonocito (2025) explores AI search algorithms in GI as semiotic resources where verbal/visual ensembles create Thumbnail Captioned Images (TCIs, henceforth) with multimodal semiotic potential. Her study examines how TCIs contribute to discriminatory representations of culturally stigmatised groups such as same-sex couples. This occurs despite the gender-inclusive mission promoted in Google's official policy (cf. Google 2024).

Drawing on deep-rooted discrimination on same-sex relationships (cf. van der Bom et al. 2015; Bachmann 2011) and its repercussions on AI-coded search algorithms (cf. Santonocito 2025), this study shifts the focus on the normalised subjects of this discussion; namely, cis-hetero-

normative couples<sup>1</sup> (henceforth, CHCs) who are engaged in a romantic and sexual partnership. From a discursive perspective, CHCs are rooted in traditional Western socio-cultural constructs (cf. Milani 2012) and constitute the normalised counterpart of same-sex couples. As part of an ongoing MCDA investigation into gender- and sex- discrimination in AI-coded search algorithms in British and Italian digital landscapes, this small-scale qualitative study contributes to explore the visual/verbal combinations enacted by GI when querying linguistically unmarked terms referring to CHCs. The terms queried in the two different digital landscapes are as follows: *couples/coppie*. For each term queried in GI, the following research questions (RQs) are addressed:

RQ1: How do GI's visual/verbal combinations contribute to the representation of CHCs?

RQ2: What are the differences in the British and Italian digital landscape of GI?

Section 2 presents GI as a multimodal semiotic technology and connects the Italian and British digital landscapes to their respective gender inclusive institutional measures. Section 3 provides the rationale for selecting the above-mentioned terms and the methodology. Section 4 delves into the analysis, while Section 5 addresses the RQs. Finally, Section 6 draws some conclusions.

## 2 Cis-heteronormative couples in Google Images

Unlike long-standing approaches to discourse which rely on verbal (text-alone) analyses, MCDA has the merit to consider verbal data as one of the many semiotic resources nestled among multimodal ensembles of different semiotic modes. The latter may be: verbal text, oral speech, images, writing, gesture, action, colour, and all the socially shaped and culturally given resources employed to construct meaning (cf. Kress 2010). The multimodal approach is especially relevant to meaning-making in digital technologies, such as GI, because these technologies “make available a wide range of modes, often in new inter-semiotic relationships with one another” (Jewitt 2016: 70), which have the potential to re-shape genres, discursive practices and social interactions (cf. Flewitt/Price/Korkiakangas 2019). Likewise, the critical approach is equally relevant because the enhancement of specific semiotic resources over others is linked to individual or collective interests to “fulfil given social functions, express a social group's values, systems of knowledge (i. e. discourses), structures and power roles” (Jewitt/Henriksen 2016: 146).

Being a search engine which processes verbal text (i. e., queried terms) and searches for relevant visual information with captions (i. e., TCIs), GI can be considered a semiotic technology as discussed by Poulsen/Kvåle (2018) because it integrates multiple modes, including visual (photographs, infographics, illustrations), verbal (captions), and contextual (tags, contextual descriptors) ones, to regulate meaning-making and widely accepted social practices. The multimodal meaning-making potential of GI lies in its inter-semiotic expansion, arising from the interaction of semiotic choices (cf. Liu/O'Halloran 2009), whereby the verbal and the visual resources do not function in isolation; rather, they interact to construct new meanings which, in

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<sup>1</sup> While other terms, such as heterosexual couples, are given more currency in language use and might be expected to feature in this article, the author deliberately adopts the term cis-heteronormative to highlight both the gender identity and sexual orientation of each individual within the couple.

this case, cohere with the term queried in GI. In addition, meaning-making is continuously negotiated thanks to the broad range of technological affordances (i. e., developers and users' possibilities for action that can re-design meaning across modes) that allow to regulate, select and combine modes to redefine genres and user engagement among a vast range of resources (cf. Adami 2015). Therefore, TCIs in GI construct meaning according to the situated cultural, historical, technological and social landscape where only specific modes and affordances are selected and configurated.

However, it is noteworthy that in GI the social context accounts for priority-ranking factors linked to socio-political and market-driven reasons (cf. Noble 2018) and to the frequency of searches (cf. Mager 2013). Since algorithms learn through continuous searching tasks, results may vary depending on how often a search is performed within a specific location. As a result, TCIs' algorithmic ranking system fluctuates according to both socio-political and marketing dynamics, as well as users' search behaviour in the geographical context where the search is performed. Additionally, the MCDA perspective highlights that the ranking system influences the meaning-making process by privileging – thus enhancing the visibility of – certain representations over others.

As is the case in digital landscapes, GI's semiotic resources and affordances are highly volatile. Since its foundation in 2001, these have undergone numerous updates. Although significant changes have occurred in Google Search, the most relevant to this study concern GI and the captioning of image results.<sup>2</sup> Such captions have increased and diversified over time. Their function, according to Google's declared intent, is to enhance users experience so that they can “easily find out what the image is about and whether the website would contain more relevant content” (Banister 2018). Earlier, captions showed only the web source; then, filter chips (i. e., clickable tabs below the search bar) were added to assist users in narrowing down their search; most recently page titles have been introduced, indicating the HTML title tag from the source webpage where the image is taken (cf. Southern 2018).

GI algorithmic ranking system operates as follows: it processes queried terms, searches the associated database for relevant webpages, and generates TCIs as results (cf. Dee/Ogilvy 2022). These results are determined by Google top-ranking factors, whose specifics remain rather opaque to end-users. However, Google informational webpage indicates that top-ranking factors include meaningfulness and relevance of the final output in relation to the verbal search query (cf. Google).

Since the historical and socio-political context where the searches are performed influences result ranking, the British and the Italian digital landscapes are selected as two European countries both committed to equality and inclusion for their ongoing institutional measures to promote broader gender inclusivity (cf. Ferrari et al. 2018; Ovseiko et al. 2017) while simultaneously experiencing contentious debate opposing traditional vs. non-traditional couples (cf., *inter*

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<sup>2</sup> While a comprehensive account of the updates to Google Search lies beyond the scope of this paper, it is worth noting that, at the time of writing, its most recent development involves the integration of generative AI. It is also important to distinguish between Google Search and Google Images: although both are AI-powered search engines, they operate through distinct algorithmic mechanisms and return different types of multimodal outputs.

*alia*, Santonocito 2022; Paterson/Turner 2019). Although Brexit poses a risk of reversing some gender inclusivity advancements previously shaped by EU policies (cf. Sanders/Flavell 2023), the UK continues to uphold many EU-derived protections, as they were incorporated into domestic law prior to its withdrawal from the EU.

Following existing literature on heteronormative discourse (cf. Derks/van den Berg 2020; Motschenbacher 2010), this study defines CHCs as traditional couples as they are conceptualised in Western society; namely, romantic and sexual partnerships between two individuals who identify with the gender and sex they were assigned at birth and are attracted exclusively to people of the opposite sex and gender (cf. Saez 2011).<sup>3</sup> Within such Western values, CHCs are positioned as subjects of family law with specific rights and obligations shaped by legal and cultural norms.

### 3 Methods

In line with the principles of linguistic gender markedness (cf. Mills 2008; Trudgill 1975) the unmarked terms referring to CHCs as the default norm are *coppie* for the Italian language and *couples* for the English language. It is noteworthy that the queried terms are not the mere translation from Italian into English (or *vice versa*). The procedure for selecting these terms involved firstly close-reading of topical literature (cf. Jones 2021; Ehrlich/Meyerhoff/Holmes 2014; Eckert/McConnell-Ginet 2013), as well as EU and domestic law;<sup>4</sup> after close-reading, the following terms emerged as linguistic referents for CHCs: *coppie*, *coppie di sesso opposto*, and *coppie di sesso diverso* (for the Italian language); *couples*, *opposite-sex couples*, and *different-sex couples* (for the English language); secondly, to select the unmarked use in Italian and English a corpus-based check confirmed that *coppie* and *couples* are highly frequent in everyday usage and broadly employed to denote romantic partnerships, reinforcing their suitability as baseline queries for this study.<sup>5</sup>

Since the analysis centres on the CTIs produced from querying GI the terms *coppie* and *couples*, each CTI is considered as a multimodal ensemble (cf. Jewitt/Kress 2003) where the verbal (captions) and the visual (thumbnail images) modes contribute to meaning making within the socio-economic, technological and geographic constraints of GI. The visual and verbal modes under scrutiny concern respectively the thumbnail image and the caption featuring the title tag

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<sup>3</sup> Although gender and sex are acknowledged as relevant dimensions informing the construction of CHCs, the author emphasises that CHCs are situated within broader articulations of gender and sex.

<sup>4</sup> Among the many sources consulted for both languages, EU law includes: EU parliamentary resolution on LGBTIQ rights in the EU (2021/2679(RSP)) (EU Parliament Resolution 2021). For the English language, UK law includes: Parliamentary memorandum (UK Parliament 2012); and the Civil Partnership (Opposite-sex Couples) regulations (Civil Partnership Regulations 2019).

For the Italian language, Italian law includes: Disegno di legge d'iniziativa della senatrice Cucchi. Comunicato alla Presidenza il 29 febbraio 2024 (Senato della Repubblica 2024).

<sup>5</sup> Corpus-based frequency checks were conducted via SketchEngine. For both languages, concordances were queried as lemmatised forms to account for inflectional variation. The itTenTen20 corpus was used for Italian, while enTenTen21 for English. Raw frequencies confirmed that *coppie* and *couples* are the most attested and commonly used terms to refer to romantic relationships, typically without modifiers. Specifically, *coppie* features 1,281,324 occurrences (as opposed to 55 for *coppie di sesso opposto*, and 151 for *coppie di sesso diverso*), while *couples* scores 9,272,046 occurrences (compared to 3,321 for *opposite-sex couples*, and 884 for *different-sex couples*).

of the source webpage. Therefore, other captions such as the web source and filter chips are considered as part of the co-text but they do not constitute the core analysis of the verbal mode.

The analytical framework integrates the verbal and visual devices elaborated by Bednarek/Caple (2012) and the discourse-analytical levels proposed by Reisigl (2007). While Bednarek/Caple (2012) offer an extensive inventory, this study focuses on four verbal and visual cues signalling: Prominence,<sup>6</sup> referring to authority and institutional significance; Impact, the consequences of an event; Superlativeness, the intensification or uniqueness; and Consonance, alignment with existing stereotypes or expectations. Drawing on the Discourse-Historical Approach, Reisigl's (2007) levels of analysis include Nomination (categorisation or reference), Predication (ascription of qualities, attributes or actions), and Argumentation (the legitimisation of claims via widely accepted *topoi*, i. e., commonplaces or warrants). The visual mode is further examined through Distance (framing), Angle (viewpoint), and Gaze (direction of the look) of the represented subjects (cf. van Leeuwen 2000). These frameworks are rooted in Critical Discourse Studies, combining the Austrian tradition (cf. Wodak/Meyer 2001) with the socio-semiotic model of social actors representation (cf. van Leeuwen 2008).

In order to minimise variables that could hinder the scalability of the data collection, display settings, browsing history and site data of Google accounts follow established procedures as in Shamsi/Heidari/Mansourzadeh (2022). Therefore, the dataset features two screenshots of GI searches conducted on September 20, 2024 in a 13-inch screen laptop in incognito mode: one screenshot displays *coppie* as queried from an Italian IP address (Picture 1), while the other one displays *couples* as queried from a British IP address (Picture 2).<sup>7</sup> As illustrated in Pictures 1 and 2, each TCI comprises a picture (visual mode) and a webpage title (verbal mode). While the pictures are complete in all their parts, the webpage title often remains syntactically incomplete. To address this limitation without leaving the GI environment, a left-click on the picture has provided an enlarged preview of the TCI, displaying the full verbal clause for inspection.

#### 4 Analysis

The following sub-sections deal with the analysis of *coppie* (4.1) and *couples* (4.2). As noted in Section 3, in the screenshots of GI searches the webpage title of each TCI is not always complete. For this reason, in the following subsections the screenshot of the query (Pictures 1 and 2) is accompanied by the list of the entire webpage titles (Tables 1 and 2). CTIs are numbered sequentially in the order they appear (left to right) and the number is preceded by the acronym of the digital landscape, i. e., IT for the Italian IP address and UK for the British IP address.

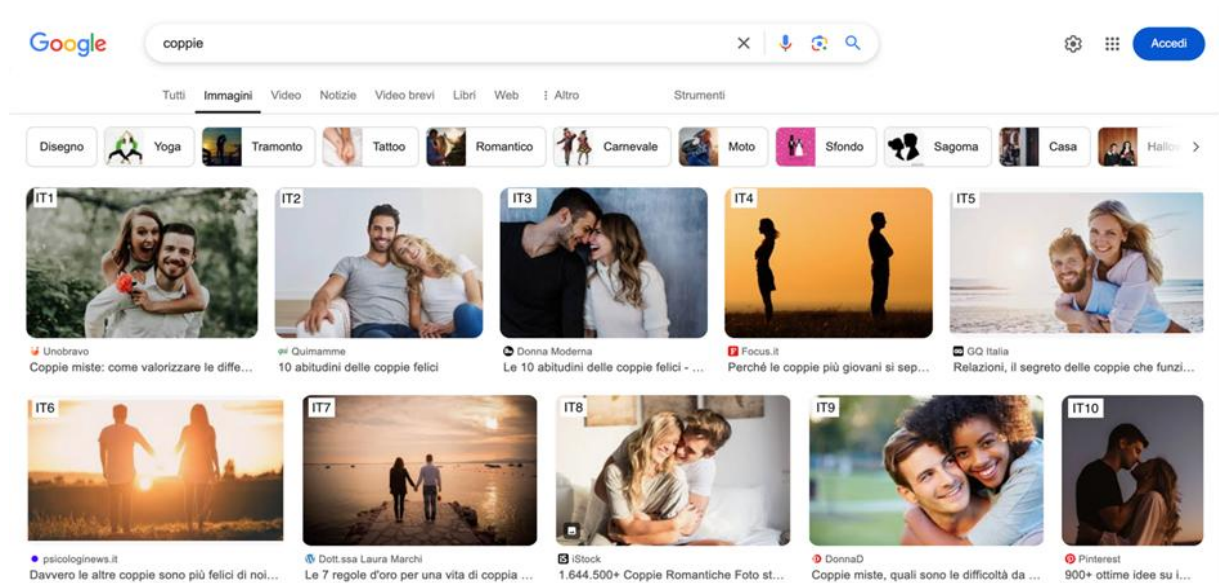
Regarding the different visual/verbal devices employed in the analysis, each TCI may feature more than one analytical aspect. However, in line with MCDA (cf. Bednarek/Caple 2012) only prominent aspects emerging from visual/verbal combinations are analysed.

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<sup>6</sup> Terms referring to analytical features (i. e., Prominence, Impact, Superlativeness, Consonance, Nomination, Predication, Argumentation, Distance, Angle, Gaze) are capitalised from this point onward to indicate their use as specialised analytical categories, distinguishing them from their general meanings.

<sup>7</sup> The location of the Italian IP address is Rome, while the location of the British IP address is London.

## 4.1 Coppie



Picture 1: Screenshot (20.09.2024) of *coppie* (Italy-based data)

TCI	Webpage titles
IT1	Coppie miste: come valorizzare le differenze 'Mixed couples: how to embrace differences' <sup>8</sup>
IT2	10 abitudini delle coppie felici '10 habits of happy couples'
IT3	Le 10 abitudini delle coppie felici 'The 10 habits of happy couples'
IT4	Perché le coppie più giovani si separano di più? 'Why do younger couples break up more often?'
IT5	Relazioni, il segreto delle coppie che funzionano 'Relationships, the secret of successful couples'
IT6	Davvero le altre coppie sono più felici di noi? 'Are other couples really happier than us?'
IT7	Le 7 regole d'oro per una vita di coppia felice secondo John Gottman 'The 7 golden rules for a happy relationship according to John Gottman'
IT8	1.646.600+ coppie romantiche foto stock, immagini e fotografie royalty-free '1,646,600+ romantic couples stock photos, images, and royalty-free photographs'
IT9	Coppie miste, quali sono le difficoltà da superare 'Mixed couples: what challenges need to be overcome'
IT10	900+ ottime idee su immagini di coppia '900+ great ideas for couple images'

Table 1: Webpage title captions (Italy-based data)

From Picture 1, it can be noted that filter chips appear in the search of *coppie*. Although this kind of content is not the core of the analysis, it is useful to observe that filter chips are displayed

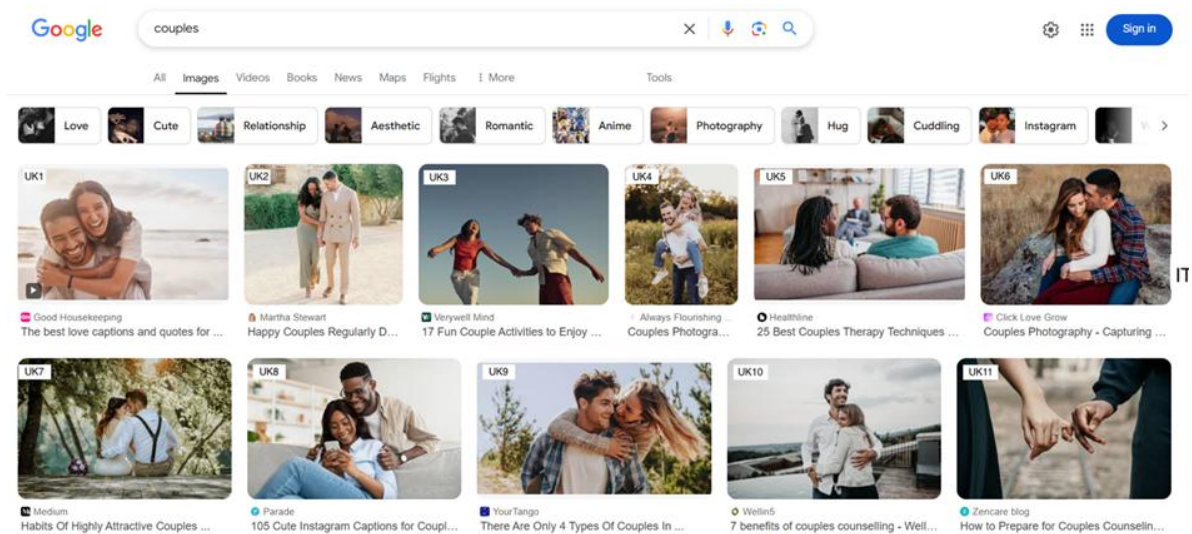
<sup>8</sup> Interlinear translations are given by the author in square brackets. Although they might appear clumsy, their aim is to highlight the lexico-grammar features.

in GI queries only when the search query can have different interpretations. In this case, *coppie* can be viewed as potentially belonging to many semantic fields. Therefore, filter chips help refine search results by providing quick-access categories related to the query (cf. Bindra 2024).

In Table 1 verbal strategies that construct Consonance appear in seven TCIs. In IT1 and IT9, Consonance ties in with the potential culture-related clashes in intercultural couples (cf. Bustamante et al. 2011), which is expressed by figurative expressions such as *valorizzare le differenze* and *difficoltà da superare*. In IT2 and IT3, Consonance revolves around the cliché of happy couples, whose verbal realisation is limited to the quasi-identical nominal phrases *le 10 abitudini delle coppie felici* and *10 abitudini delle coppie felici*. Consonance with the above-mentioned cliché is also evident in IT5 and IT7. Although the attribute *felici* is absent in IT5, *segreto, funzionano* and *regole d'oro* relate to happy couples as an ideal to aspire. Additionally, in IT7 Prominence reinforces the significance of happy couples as a relationship ideal by referencing the expert's opinion, namely, psychologist John Gottman. The same cliché is challenged in IT6, where the Argumentation dismantles the aspirational ideal. Notably, the interrogative construction and the adverb of affirmation *davvero* questions the comparative adjective *più felici*. The idyllic cliché is definitely challenged in IT4, whose argumentative pattern motivates the truth claim, i. e., young couples break up more often. Nomination stands out in IT8 and IT10, where nominal phrases are accompanied by evaluative language (i. e., *romantiche, royalty-free* in IT8 and *ottime* in IT10) and striking quantifiers (i. e., “1.646.600+” in IT8 and “9002” in IT10). Together, these verbal elements foreground Superlativeness. Quantifiers of large or striking numbers are present also in IT2, IT3 and IT7.

While the verbal mode exhibits different instances of Consonance, Nomination, Prominence, and Argumentation, in Picture 1 the visual mode shows less variation. Almost all images tend to convey close personal Distance, frontal eye-level Angle and direct Gaze. Based on Kress/van Leeuwen (1996/2020), this combination tends to convey intimacy and involvement, enhancing the positive connection and inviting viewers to engage with the joyful feeling of the represented subjects. However, IT4, IT6 and IT7 do not follow this tendency. In these three, Gaze is absent and represented subjects are captured from a long shot Distance, conveying lack of involvement. In IT4 the lateral profile of the represented subjects reinforces the emotional distance while validating the truth claim that young couples break up more often. As for IT6, although it aims to question the concept of the happy couple both verbally and visually, the visual mode, particularly the blurred effect produced by the sunlight, may draw on culturally conventionalised semiotic resources associated with Western romanticism. As Kress/van Leeuwen (1996/2020) note, soft focus and warm lighting are visual devices that connote intimacy, nostalgia, hesitating connection and tenderness, subtly reinscribing normative ideals even when verbal elements question happiness. However, external viewers cannot access the possibly vulnerable connection, as it is indicated through the rear Angle. In addition, this alternation between detachment and involvement is also conveyed in IT7 where the distinct hand-holding counteracts all visual elements signifying Distance. In this case, the visual hand-holding combines with the verbal Prominence established through the psychologist's opinion to suggest introspection, possibly a journey toward happiness guided by the seven golden rules.

## 4.2 Couples



Picture 2: Screenshot (20.09.2024) of *couples* (UK-based data)

TCI	Webpage title
UK1	The best love captions and quotes for your cute photos
UK2	Happy couples regularly do together 10 things
UK3	17 fun couple activities to enjoy each other's company
UK4	Couples photography in Central Illinois
UK5	25 best couples therapy techniques to try
UK6	Couples Photography – Capturing Love Stories
UK7	Habits of highly attractive couples
UK8	105 cute Instagram captions for couples
UK9	There are only 4 types of couples in this world, according to research
UK10	7 benefits of couples counselling
UK11	How to prepare for couples counselling: 7 ways to get ready

Table 2: Webpage title captions (UK-based data)

Picture 2 shows that filter chips are present also in the *couples* search. This suggests that, also in the context of GI's UK-based digital landscape, the term *couples* is associated with different semantic fields.

In Table 2, verbal devices that integrate Nomination are evident in UK1, UK4, UK6, UK7, UK8 and UK10. Among these, certain CTIs feature nominal phrases with evaluative language (i. e., *best* in UK1, *central* in UK4, *highly attractive* in UK7 and *cute* in UK8) and reference to feelings (i. e., *love stories* in UK6), both of which contribute to Superlativeness. This echoes Bednarek/Caple (2017), who explicitly link attitudinal and intensified language to Superlativeness. In UK8 and UK10 references to striking quantifiers (respectively, “105” and “7”) reinforce the combination of Superlativeness with Impact. Similarly, other attention-catching numbers appear in UK2 and UK3 (“10” and “17”, respectively), where they are paired with predicates such as *happy* and *fun*. Apart from qualifying social actors, these two forms of Predication suggest

Consonance with the notion of couples engaging in enjoyable activities. Consonance is further emphasised in UK5, UK10 and UK11, where the verbal content aligns with the rising normalisation of couples participating in counselling therapy (cf. Lebow/Snyder 2022). In these cases, the integration of Superlativeness emerges through the presence of striking numbers (“25” in UK5, “7” in UK10, and “7” in UK11), while highlighting effects on individuals foregrounds Impact (i. e., *benefits* in UK10). In UK9, the reference to *research* activates Prominence, reinforcing Argumentation through the assertion of certainty conveyed by the self-legitimising truth value *there are only 4 types of couples in this world*.

In Picture 2, dominant visual patterns integrate a combination of close personal and medium Distance, frontal Angle and Offer images. The latter draw on the concept of Gaze and consist in the visual representation of participants looking at each other or at something within the picture, with no staged eye contact with the viewer. Kress/van Leeuwen (1996/2020) suggest that close frontal shots emphasise intimacy, emotional connection and empathetic involvement with external viewers, while the medium Distance and frontal Angle creates a sense of personal connection that maintains some detachment. In the same vein, the Offer image invites the external viewer to observe represented subjects’ intimacy without being directly engaged. Although there is some degree of variation in Angle orientation (e. g., slight downward Angle in UK2 and UK6, upward Angle in UK3), the above-mentioned visual combination (i. e., close or medium Distance with a frontal Angle and an Offer image) is observed in most TCIs, except for UK5, UK7 and UK11. UK5 and UK7 display medium Distance, which allows the external viewer to observe the represented subjects without intruding on their privacy. This is combined with a rear Angle and an Offer image. The back-facing Angle of the represented subjects reinforces the privacy and intimacy of the moment and conveys slight detachment. Similarly to other cases of medium Distance and Offer image (UK2, UK3), the absence of direct Gaze invites an external observation without direct engagement. In UK5, these visual cues suggest a detached view of a delicate moment of confrontation, conveyed through the arrangement of participants, Gaze direction and proxemic cues (e. g., shared couch, close physical distance between the couple, slightly turned bodies). As argued by O’Halloran et al. (2011), the integration of these semiotic resources implies relational tension or conversation of emotional gravity. These visual elements resonate with the verbal Superlativeness and Consonance associated with couples engaging in therapy. In UK7, similar visual cues create a sense of intense intimacy, which chimes with the verbal Superlativeness. The visual elements suggesting detachment reinforce the idea that the represented subjects’ (i. e., *highly attractive couples*) intimate moment is to be observed from the outside. Turning to UK11, the combination of close Distance, frontal Angle, and the symbolic power embedded in the gesture of the hands draws attention to connection, bonding, and commitment. In multimodal discourse, symbolic power lies in the capacity of visual elements to naturalise ideologies and values (cf. Kress/van Leeuwen 1996/2020). Here, the absence of human gaze de-individualises the subjects, allowing for the universality of the hand gesture, which stands in for a broader narrative of relational intimacy. The combination of visual and verbal elements reveals Consonance with the discursive construction of couple therapy. This is embodied in the delicate touch of the two fingers which are set against a blurred railway track, evoking transition and emotional complexity.

## 5 Discussion

The analysis reveals that the multimodal representation of *coppie/couples*, taken as linguistic unmarked query terms, chimes with normalised conceptualisations and socio-cultural norms entrenched in what is the Western basic default norm of conceiving CHCs (cf. Mills 2008). While the specific patterns uncovered here offer novel insight into how GI's multimodal affordances reproduce these norms, they also align with established findings on skewed AI data training and large-scale model biases (cf., *inter alia*, Tamburrini 2025; Noble 2018). In both datasets, TCIs co-construct CHCs as an idyll of relational success and desirability that marginalises alternative couple forms and reinforces the monolithicity of cis-heteronormative coupledom.

To address RQ1, GI's visual/verbal combinations representing CHCs in the Italy-based data verbally construct Consonance with stereotypical ideals of happy, romantic, or functioning couples (e. g., IT2, IT3, IT5, IT7 and IT8). For instance, in IT2, IT3 and IT7, nominal phrases such as *abitudini delle coppie felici* and *regole d'oro* reproduce aspirational narratives that align with conventional relationship ideals. However, in some TCIs such idyllic Consonance is challenged via two opposing aspects. The first refers to possible challenges in intercultural couples (*differenze* in IT1, *difficoltà da superare* in IT9); the second relates to different argumentative schemes (*coppie giovani si separano di più* in IT4, *davvero le altre coppie sono più felici?* in IT6). This deviation from the overall tendency is also evident from the visual cues of IT4 and IT6, both of which display detachment through long shots. Detachment is also evidenced in the lateral profile of IT4 and in the rear Angle of IT6 and IT7.

Likewise, the UK-based data construct verbal Consonance via the notion of couples engaging in enjoyable activities (in UK2 and UK3) or taking part in counselling therapy (in UK5, UK10 and UK11). While the concept of couple counselling may suggest normalisation of formerly marginalised relationship models, the remaining TCIs predominantly feature evaluative language (e. g., *best* in UK1 and UK5, *happy* in UK2, *highly attractive* in UK7, *cute* in UK8) and visual cues that align with the normalised view of couples as the portrayal of a man and a woman. Such evaluative language typically reinforces dominant heteronormative ideals by attributing positive, desirable qualities to representations that match the idealised image of CHCs. As Elias/Gill (2018) argue, digital representations often naturalise heteronormative ideals through aesthetic and emotional appeals. In the dataset, evaluative language not only suggests relational success but also tends to be visually paired with heterosexual-looking couples, thereby positioning this specific CHC as socially ideal. Such verbal-visual pairings implicitly uphold a neoliberal and heteronormative imaginary of coupledom that equates normative gender roles and physical attractiveness with emotional fulfilment (cf. Motschenbacher 2010). In this way, the repeated association of evaluative language with CHCs functions as a discursive mechanism that marginalises alternative relationship configurations.

In both digital landscapes, verbal Nomination and Superlativeness emphasise couples' success and conformity to dominant social norms. Striking quantifiers (i. e., "1,646,600"+ and 900 in IT8 and IT10; "10" in UK2, "17" in UK3, "25" in UK5, "105" in UK8, "7" in UK10 and UK11) amplify Superlativeness – and at times, Impact (i. e., *benefits* in UK10) – aligning with Blom/Hansen's (2015) research on how large numbers are used as clickbait strategies that

reinforce sensationalism and factualness in digital content. These quantifiers are considered striking because of their specificity and deviation from rounded, generic figures. Odd or detailed numbers tend to draw more attention and generate a perception of factual precision, curated content, and significance, which increase credibility and engagement (cf. Blom/Hansen 2015). When paired with evaluative language, these numbers activate Impact, i. e., linguistic and visual devices that foreground consequences or emotional resonance (cf. O'Halloran et al. 2011). Common visual cues – such as close or medium-close Distance, frontal eye-level Angle and broader positive engagement – similarly contribute to Superlativeness. Although these cues are typically employed to create emotional connection and intimacy, their repeated use in the dataset in highly stylised and idyllic portrayals undermines authenticity in the representation of CHCs, reinforcing the idealised and marketable versions of intimacy aligned with neoliberal visual culture (cf. Elias/ Gill 2018).

As for RQ2, despite both datasets privilege heteronormative representations, key differences emerge in the way visual and verbal modes are combined. Italy-based data shows stronger reliance on emotive language, relational success, and overcoming of difficulties in intercultural couples. This is evident in repeated references to happy couples (e. g., IT2, IT3), secrets of couples that work (e. g., IT5), golden rules (e. g., IT7) and difficulties in intercultural couples (e. g., IT1 and IT9). Likewise, the UK-based data maintain emotive language (e. g., *love* in UK1, *happy* in UK2, *fun* in UK3). However, in this dataset there is also slight evidence of couples' empowerment (*happy couples regularly do together* in UK2, *how to prepare* in UK11), counselling-focused narratives (e. g., UK5, UK10, UK11), and aspirational aesthetic standards (*best* in UK1 and UK5, *highly attractive couples* in UK7, *cute* in UK8). Overall, these verbal cues reinforce a culturally ingrained emphasis on relational stability and conformity to traditional relationship norms (cf. Baker 2008).

Another notable difference between the two datasets emerges in the visual representations of IT4, IT6, IT7, UK5, UK7 and UK11. While long shot and absent Gaze of these TCIs convey detachment and inaccessible (for the external viewer) intimacy or vulnerability, each TCI advances different meaning-making possibilities. Specifically, IT4 evokes a sense of rigid conflict, through the combination of long shot Distance, lateral profile, and lack of Gaze, which together create emotional detachment and suggest a lack of mutual engagement. In comparison, IT6, IT7, UK5 and UK11 suggest introspection and vulnerability that remain inaccessible to the viewer. In contrast, UK7 portrays private intimate affection, further emphasising emotional distance from the viewer through its visual cues (i. e., medium Distance, rear Angle, and Offer Image).

The findings are consistent with research on bias in search algorithms, confirming that querying unmarked linguistic terms (i. e., *coppie/couples*) in GI produces multimodal representations of CHCs that align with dominant narratives of Western socio-cultural values. These representations reinforce cis-heteronormative coupledness as the default relational model, marginalising alternative configurations of CHCs. It is important to note, however, that even if the verbal and visual cues suggest that a couple consists of a woman and a man, this does not confirm that either individual identifies as cisgender or heterosexual.

Although in the dataset broader gendered and sexual dimensions are not explicitly contested – namely, GI search results for *coppie* and *couples* do not construct overt discriminatory portrayals – these findings contribute to the existing body of literature on gender-biased AI architectures. Overall, privileged representations of CHCs are achieved verbally through superlative language and striking quantifiers that signal abundance and authority; visually, this dominance is enacted through repeated use of close or medium-close Distance, frontal Gaze or Offer image, and intimate framing that normalises the aesthetic of a man-woman dyad.

These verbal/visual combinations are heavily imbued with a dominant focus on idealised standards, attractiveness and success-driven narratives, thereby excluding possible diverse representations of CHCs. While the feminist-Foucauldian perspective (cf. Elias/Gill 2018) does not directly engage with the object of this study, its emphasis on neoliberal ideals of individualism, self-optimisation, and aesthetic perfection offers a valuable perspective for interpreting these results. Notably, Prominence of idyllic, highly aestheticised and result-oriented neo-liberal couples in GI reflects broader socio-political models that position relationships as projects of self-improvement and consumption. In this sense, the multimodal representation of CHCs in GI aligns with aspirational relationship ideals that reinforce marketable social norms.

## 6 Conclusion

This study has explored how GI search results of unmarked terms *coppie/couples* construct multimodal representations of CHCs in the Italian and British digital landscapes. Drawing on MCDA, findings confirm that, despite due differences and specific patterns inherent to the respective digital landscapes, the unmarked terms privilege specific representations. Such multimodal representations reflect dominant narratives and values associated with Western cis-heteronormative coupledness while marginalizing alternative CHCs.

In particular, GI results reinforce representations of CHCs that align with a neo-liberal representation of coupledness. Given GI's ranking system, and in line with current literature on the field, the presence of TCIs that reflect Western and neoliberal values in top-ranking positions across both datasets suggests that these are perceived as the most meaningful and relevant representations of CHCs. With both datasets reflecting such values, results indicate that Italy-based data tend to emphasise aspirational relationship ideals such as happiness, while UK-based data highlight aesthetic appeals and relationship growth themes.

Overall, these findings contribute to ongoing discussions in MCDA research on the ideological implications of AI-regulated systems. By examining CHCs, the results, on the one hand, illuminate how Western heteronormative values are transposed into the visual and verbal modes governed by AI-coded search engines; on the other hand, these results highlight the importance of investigating normalised unmarked identities for revealing dominant narratives while also uncovering marginalised or excluded ones. These findings also add to the MCDA literature by suggesting that GI's algorithmic processes, through the simultaneous reinforcement and silencing of specific relationship norms, may shape public perceptions of relational success, impacting social norms and cultural expectations in digital landscapes.

While these findings offer valuable insights into complex meaning-making processes and discursive implications in GI, it is important to recognise some limitations linked to the dataset.

First, the volatility of data collection and the fluctuation of priority ranking factors must be acknowledged and critically addressed within the digital affordances of GI. This leads to the second limitation: namely, the limited dataset reflects a specific socio-cultural and temporal context, which constraints the scope for broader generalisations. Although data cannot be considered representative of the entire British and Italian digital landscapes, the results of this small-scale analysis align with existing literature on the field. This confirms the effectiveness of MCDA theoretical framework for data analysis, reinforcing its relevance and providing a reference point for further investigation.

Future research should expand the dataset, incorporate methodological resources to enhance generalisability and include additional search terms referring to CHCs.

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