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## Metaphors of resistance in the counter-discourse of Spanish, English and Dutch cycling activists

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### Abstract

There is a current need for exploring new mobility systems — and related narratives — that could help in addressing the challenges caused by climate change. As such, this paper aims to unveil the counter-discourses that promote cycling as a sustainable means of transport and an ecological solution to the current climate crisis. It identifies the main conceptual metaphors of contemporary emerging mobility as framed by Spanish, English and Dutch-speaking cycling advocates. The data, which includes 95 metaphors, were retrieved from X (Twitter), and analyzed qualitatively. Expanding upon the established strategies for challenging dominant metaphors (Gibbs & Siman 2021, Van Poppel & Pilgram 2023), we investigated the workings of *resistance metaphors* in the discourse of cycling activists. The study showed that *partial resistance metaphors* elaborate on the source domains of institutionalized mappings (CITY IS A BODY, TRAFFIC IS A CIRCULATORY SYSTEM). They profile motorized mobility as an agent of disease (e.g., blood clot, drug, virus), which negatively affects the city as a whole; alternatively, they also foreground cycling as a potential healer (e.g., cycling infrastructure as band-aids or surgery). Additionally, *complete resistance metaphors* expose the drawbacks of motorized mobility and envisage alternative urban mobility designs through the introduction of new source domains (CITIES ARE ECOSYSTEMS, CITIES ARE HOUSES). The contribution of these metaphors to the current discourse on urban mobility ranges from an opposition to motonormativity to emphasizing cycling as a solution and promoting new kinds of urban co-existence. The underlying reconceptualization of the city from its perception as a (mechanized) body to that of a house or ecosystem also reveals a shift in its function from being a space for moving to being a space for living.

**Key words:** *sustainable urban mobility, emerging mobility, ecolinguistics, cognitive linguistics, discourse of cycling activists, conceptual metaphor*

**Authors' contributions.** Author 1 and Author 2 have contributed equally to this research paper, and therefore should be both considered *joint first authors*.

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## Антимоторные метафоры в дискурсе испанских, английских и голландских велоактивистов

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### Аннотация

В настоящее время существует потребность в изучении новых систем мобильности и связанных с ними нарративов, которые могли бы помочь в решении проблем, вызванных изменением климата. Цель данной статьи — выявить дискурсивные средства, продвигающие велосипед как устойчивый вид транспорта и экологичное решение текущего климатического кризиса. В ней определяются основные концептуальные метафоры современной развивающейся мобильности, создаваемые испано-, англо- и голландскоязычными сторонниками велосипедного движения. Данные, включающие 95 метафор, были получены из X (Twitter) и подвергнуты качественному анализу. Развивая известные стратегии оспаривания доминирующих метафор (Gibbs & Siman 2021, Van Poppel & Pilgram 2023), мы исследовали употребление *антимоторных метафор* в дискурсе активистов велодвижения. Исследование показало, что *частичные антимоторные метафоры* развивают исходные области институционализированных изображений (ГОРОД — ЭТО ТЕЛО, ТРАНСПОРТ — ЭТО СИСТЕМА КРОВООБРАЩЕНИЯ). В них моторизованная мобильность представляется как возбудитель болезни (например, тромб, наркотики, вирус), которая негативно влияет на город в целом. Сдругой стороны, они также выдвигают на первый план велосипед как потенциального целителя (например, велосипедная инфраструктура как пластырь или операция). Кроме того, *полные антимоторные метафоры* раскрывают недостатки моторизованной мобильности и предлагают альтернативные варианты городской мобильности путем введения новых исходных доменов (ГОРОД — ЭТО ЭКОСИСТЕМА, ГОРОД — ЭТО ДОМА). Вклад этих метафор в современный дискурс о городской мобильности варьируется от отрицания мотонормативности до провозглашения велосипеда как средства решения проблемы и продвижения новых видов сосуществования в городе. Концептуализация города не как (механизированного) тела, а как дома или экосистемы также показывает изменение его функции от пространства для перемещения к пространству для жизни.

**Ключевые слова:** *устойчивая городская мобильность, развивающаяся мобильность, эколингвистика, когнитивная лингвистика, дискурс велоактивистов, концептуальная метафора*

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## **1. Introduction**

The need to address climate change, as one of the Sustainable Development Goals (SDG) established by the United Nations, implies, amongst other policies, promoting sustainable transport (UN 202: vi). In this context, cycling shall be highlighted as an accessible, inclusive, affordable, healthy and ecological solution which could help reduce direct emissions while also improving citizens' health and well-being (UN 2021). The European Declaration of Cycling (October 2023) views its development as essential for achieving the EU's climate, zero pollution and energy efficiency objectives. Promoting cycling as a sustainable means of transport, however, does not come without challenges as "it presents a classic case of the conflict between individual preferences and choices, as opposed to the wider needs of society to protect the environment and future generations" (Banister 2011: 1545).

Any transformative action requires not only individual changes in means of transport use for moving, but also innovations in governance and at the institutional and policy levels (UN 2021: viii). The present research aims at unveiling environmental counter-discourses which could help to mobilize people and promote new policies that highlight the role of cycling as an ecological solution to the current climate crisis. This appearance of 'new' discourses aligns with the growing role of Ecolinguistics as a scientific discipline, and the need to identify how mental models, usually instantiated by language, influence our perception of the world and our "behaviour and lie at the heart of the ecological challenges we are facing" (Stibbe 2015: 1–2). One such model is conceptual metaphor (Lakoff & Johnson 1980), which previous studies have already shown to be useful as a reasoning (Thibodeau & Boroditsky 2011), persuasive (Brugman et al. 2019), and performative (Te Brömmestroet 2020) mechanism that can help to avoid climate *doomism* (i.e., perceiving climate change as unavoidable (Johnstone & Stickels 2024)). Studies on metaphorical mobility frames, however, are scarce (Caviola 2020, Caviola & Reisgl 2020, Caimotto 2020, 2023ab, Filardo-Llamas & Pérez-Hernández 2023).

In our study of metaphors used by cycling advocates, we align with the central principles of Ecolinguistics (Stibbe 2015) and make use of the specific theoretical tools of Critical Metaphor Analysis (CMA) (Charteris-Black 2004, Wodak & Meyer 2009, Hart 2010, Goatly 2017, Musolff 2019). In a further development of the collection of mechanisms for resisting metaphors (Gibbs & Siman 2021, Van Poppel & Pilgram 2023), we propose the notion of *resistance metaphor* as a means of unveiling and questioning the metaphorical stories of mobility that we live by. As noted by Stibbe (2014: 217), "these are not stories in the traditional sense of a narrative, however, but rather discourses, frames, metaphors and, in general,

clusters of linguistic features that come together to convey particular worldviews.” As such, we propose that institutionalized metaphorical frames can be resisted not only by performing particular moves (Van Poppel & Pilgram 2023) or through argumentative exposure of their inappropriateness (Wackers, Plug & Steen 2020, Bilstrup Finsen, Steen & Wagemans 2021), but also via metaphorical reframing processes.

The general objective of this study is to identify the resistance metaphors that structure the discourse of Spanish, English, and Dutch-speaking cycling advocates, understood as the counter-discourse of a new discourse coalition aimed at changing conventional approaches to (motorized) mobility. As such, the analysis will serve a double objective: i. unveiling how counter-discourses successfully elaborate on previous institutionalized metaphors (e.g., cities as bodies) to expose and resist the biases of already solidified conceptualizations of urban mobility which promote *mononormativity* (i.e., *partial resistance metaphors*), ii. unveiling the framing effects of alternative metaphorical narratives of the city and of urban mobility pertaining to peripheral, not yet institutionalized discourses of cycling advocates, which promote a positive, engaging and socially acceptable conceptualization of cycling (i.e., *complete resistance metaphors*). Ultimately, the results of the analysis aim to offer informed criteria upon which policy makers can rely for selecting metaphors that may encourage the development of sustainable mobility systems in urban contexts (as suggested by the United Nations’ report on transport (UN 2021)).

To meet these objectives, we will address the following research questions: RQ1. which metaphors structure the discourse of pro-cycling advocates and activists? and RQ2. to what extent do the metaphors used by the activists in our data elaborate on previous metaphors about the city and about mobility or present new conceptualizations of the urban space and its mobility system? To answer these research questions, we have adopted an ad-hoc qualitative method for the analysis of metaphor on social media. This method follows the general principles of CMA (Charteris-Black 2004, Hart 2010) with small adaptations aimed at guiding the identification procedure and acknowledging the multimodal nature of communication in social media.

The contents of the article are organized as follows. Section 2 introduces our theoretical framework and offers a critical revision of previous studies on the metaphorical conceptualization of cycling and urban mobility. Section 3 describes the data and methodological decisions that guide the analysis. Section 4 presents and discusses the results of the study and Section 5 offers conclusions and suggestions for future research.

## **2. Literature review**

### **2.1. Conceptual metaphor and critical metaphor analysis**

Conceptual metaphor is a multifunctional cognitive tool that allows speakers to use their knowledge of familiar, concrete domains (source) to understand, talk,

and reason about more abstract, target notions (Lakoff 1987, Lakoff & Johnson 1980). Despite its usefulness, it also displays potential risks both as a conceptualization tool and as a communicative strategy. The selection of source domains may lead to biased representations of reality, influencing our perceptions, actions, and even memories (Sontag 1978, Thibodeau & Boroditsky 2011), as has been amply attested in connection with a varied typology of discourses, such as politics or advertising (Charteris-Black 2011, Pérez-Hernández 2019).

The ability of conceptual metaphor to trigger different emotional reactions and logical conclusions about a topic has also been closely studied within Critical Metaphor Analysis (CMA) (Charteris-Black 2004, 2011, Wodak & Meyer 2009, Hart 2010). Studies on the identification of ideologically loaded metaphors and the exposure of their biases have been carried out on a variety of discourse topics, including racist immigration metaphors (Santa Ana 2002, Hart 2021), misleading science mappings (Nerlich & Hellsten 2004), ineffective medical metaphors (Hendricks et al. 2018), or more recently, war metaphors of the COVID pandemic (Olza et al. 2021).

As observed in Gibbs & Siman (2021) and Van Poppel & Pilgram (2023), resistance to prejudiced metaphorical frames may take many forms. It can be individual (e.g., Sontag's (1978) initial resistance of cancer metaphors being a prominent example) or collective (e.g., IMMIGRATION IS FLOWING WATER metaphor; Hart 2010). It can range from *complete resistance* based on lack of situational acceptability to *partial rejection* of only some aspects of the metaphorical mapping or the same metaphor being rejected in some settings, but not others. Strategies to resist ineffective or inappropriate metaphors often involve the exposure of their biases through argumentation and explanation (Wackers, Plug & Steen 2020, Bilstrup Finsen, Steen & Wagemans 2021).

We shall argue that institutionalized metaphorical frames can also be resisted through their partial elaboration or complete substitution by new metaphors, which thus may function as vehicles of social contestation, and/or political action. A fully-fledged definition of the notion of *resistance metaphor* is offered in Section 4.

## **2.2. Metaphors of mobility and cycling**

The conceptualization of the city as a human body stems from the work of the French urbanist Christian Patte, who envisioned mobility through the imagery of the human circulatory system, with arteries and veins as the source domains for the current system of one-way streets (Sennet 2018: 23) and cars metaphorically conceptualized as the (life) blood running through them. Effective mobility is linked to their well-functioning and traffic jams are seen as blockages of the circulatory system with an evil effect on the overall health of the city. Similarly, Caimotto (2023a: 194) has shown how recent attempts to cut down motorized traffic have been metaphorically conceptualized as restrictions on the life blood of

a city (i.e., motorized traffic) and, therefore, as the origin of a coronary disease (i.e., lack of efficiency of the traffic system).

Te Brömmelstroet (2020) argues that the metaphor of the city as a body interacts with well-established metaphorical mappings stemming from the realm of contemporary neoliberal economics, such as (TRAVEL) TIME IS MONEY. This metaphor blinds us to the conceptualization of a journey as a goal in itself, full of subjective experiences and memories. Cavola & Sedlaczek (2020) identified the conceptual metaphor MOBILITY IS A CONSUMER GOOD, which highlights the nature of mobility as yet another consumer service, while silencing its material conditions (i.e., infrastructure or energy needs), and negative consequences (e.g., energy consumption or pollution).

City traffic has also been metaphorically conceptualized as flowing water, and streets as pipes that should have “free flow” conditions (Te Brömmelstroet 2020: 43). As a result “the street shifted from a multi-dimensional space used for a variety of functions to a **mono-functional space** where transit dominated” (Peters 2006: 130–131, our emphasis). This also led to the division and segregation of space between different types of mobility agents, such as cars, bicycles, or pedestrians. Similarly, Cavoli & Sedlaczek (2020) explain how the related metaphor TRAFFIC IS A RIVER assimilates the flow of cars with a natural phenomenon, ignoring its artificial origin, silencing its negative consequences, and minimizing individuals’ responsibility.

Metaphorical conceptualizations of cities as bodies or rivers have become solidified in common everyday-life discourse and institutionalized in mobility policies, contributing to the promotion of *motonormativity*, defined by Walker, Tapp & Davies (2023) as the unconscious biases about the role of private cars that permeate our society. The blood and river metaphors activate the connectivity and efficiency frames by which mobility has been understood throughout the 20<sup>th</sup> and 21<sup>st</sup> centuries and lead to an understanding of the city streets as subservient to the general purpose of motorized mobility, highlighting the need of keeping traffic flowing, while hiding its negative side effects (i.e., fuel consumption and environmental pollution). However, this conceptualization of the city has not always been predominant. As Norton (2011: 46) points out, before the arrival of the motor vehicle in the 1920s streets had had a long-standing function as a place for daily life where people walked, met, played, and traded.

Peripheral discourse coalitions, however, have attempted to overcome the mainstream motonormativity by metaphorically foregrounding different forms of urban coexistence. The city is sometimes conceptualized as an ecosystem, i.e., a spatial, organic area with its own metabolism and feedback systems (Hagan 2015), thus profiling the existence of multiple entities as an essential trait of a living landscape (Schliephake 2020: 7). A similar foregrounding of the co-existence of diverse entities can be observed in the notion of *automulticulturalism* (Dawson, Day & Ashmore 2020), which conceives the street as a multi-vehicular space akin

to a multicultural world. In it, there are ‘natural’ vehicles (cars) — perceived as the most rightful users of the roads-, ethnic minorities (pedestrians and cyclists), as well as cases of vehicular marginalization and infrastructural apartheid (segregated car and bicycle lanes). This metaphor opens the path to an appreciation of “the unique affordances of particular vehicles, and thereby, [to] sustain the road as an integrated multiautocultural space” (Dawson, Day & Ashmore 2020).

Following our proposal above, these alternative non-institutionalized metaphors are examples of complete resistance metaphors against the institutionalized discourse of *motonormativity* (Walker 2024). They do not only reject the original mainstream metaphorical frames (i.e., city as a body or a river) but also attempt to propose new stories by which to interpret urban space and mobility.

Motonormativity has also been questioned by means of partial resistance metaphors, which elaborate on the original frames to expose their biases and promote a critical view about them. Caimotto (2020, 2023ab) has shown how cycling activists elaborate on the city as a body mapping by envisaging motorized mobility as a drug addiction and cars as drugs. Additionally, drivers are seen as victims (car dependent) of a mobility planning system that offers them no other alternative (2023b: 58). This strategy avoids offering a negative image of car drivers and confronting them with other road users (e.g., cyclists and pedestrians), while still exposing the negative consequences of motonormativity. Unfortunately, the relationship between the actors of the different types of mobility has often been metaphorically framed in terms of war. As Caimotto (2023b: 58) argues “the creation of a narrative of ‘cyclists’ at war with ‘drivers’ and in conflict with ‘pedestrians’ generates reified identities that become part of a ‘destructive story we live by’ (Stibbe 2014).” These war metaphors fuel narratives of conflict and discourses of violence which lead to polarization, and which have amply been shown to lack long-term efficiency (Olza et al. 2021).

### 3. Data and methodology

This study seeks to identify the conceptual metaphors activated by cycling advocates (RQ1) and to explain how these resist institutionalised conceptual metaphors (RQ2). For this purpose, we have identified cycling activists as those who send messages aimed at bringing policy changes in urban mobility (cf. Collins Dictionary). Thus, they represent an example of a peripheral discourse coalition, which is organised on social media. For this study, X (formerly Twitter) has been selected as our source of data.

For collecting data, we identified cycling advocates on X on two grounds: i. they included a reference to “bike” or “pro-bike” on their name and/or their bio profile, or ii. they systematically posted messages aimed at promoting the use of bikes as a means of urban transport. Because preliminary observations showed that these users are globally interrelated, we have selected accounts from Dutch, Spanish

and English-speaking activists. The selection of these contexts is mostly motivated by the identified difference in the frequency of use of bicycles and cars as means of transport (see Haustein & Nielsen 2016). As such, a total number of 45 accounts have been identified. These accounts were followed between 1 November 2023 and 31 May 2024 and posts were manually selected and copied onto an Excel sheet.

Our selection of data, which contains 95 instances of metaphors, followed two main criteria. First, all the selected accounts can be considered members of the cycling advocates group. Second, all were determined by an intertwined selection of language and geographical anchorage. These criteria can result in loss of knowledge about the situational context in which messages are produced and an inability to explain interaction between users. Still, the data fulfils the main exploratory aim of the article (Herring 2004): identifying how resistance metaphors are used by cycling advocates.

After compilation, each post was analysed along three dimensions, with the goal of identifying systematic patterns of metaphor use and the type of resistance that was exercised in the posts: partial (i.e., reframing aspects of institutionalised cognitive metaphors) or complete (producing new conceptual metaphors that challenge motonormativity). The first stage has been the *identification* of such metaphors, for which we have loosely adapted MIP (Metaphor Identification Procedure) (Pragglejaz Group 2017) by checking the contextual meaning of potential metaphorical expressions against their basic meaning. In cases where metaphoricity was identified, these posts became part of the data sample, and the source and target domains were then coded in the Excel table. Source domain is understood here as the dimension upon which contrast is established to refer to mobility. Target domains have been identified as the subdimension of mobility which is foregrounded in discourse. This identification method allowed us to create a list of potential expressions and to explore how they are used in discourse (Semino 2008).

Table 1. Dimensions in the analysis

Dimension		
1. METAPHORICITY	Metaphor present	Domain
2. TYPE OF RESISTANCE	Partial	Complete
3. SEMIOTIC MODE	Textual	Visual

The second dimension in our procedure is aimed at guiding our answer to RQ2 and relates to the type of resistance exercised by the metaphorical expressions. As such, it can be considered a part of the second stage in CMA: *interpretation* (Charteris-Black 2004). To understand the notion of *resistance metaphor*, a further conceptual distinction shall be made between conceptual metaphor — as a cognitive operation which guides our thought — and metaphor in discourse — i.e., its forms and functions when used in authentic language (Semino et al. 2018: 626). With this



distinction in mind, we can define resistance metaphors as those systematic patterns of metaphorical language used in context to resist solidified metaphorical thoughts about mobility (as described in section 2). Following Gibbs & Siman (2021), we have considered *partial resistance metaphors* those that depart from the institutionalized conceptual metaphors that reproduce motonormative thinking. They retain the concept but switch “roles and valence” (Gibbs & Siman 2021: 689). Partial resistance metaphors are the materialization of Santa Ana’s (2002) urge to create insurgent extensions of existing metaphors to contest dominant and conventional frames. We have considered *complete resistance metaphors* those that provide alternative ways of thinking about mobility and do so by providing alternative source domains. A similar distinction is proposed by Burgers (2016) in terms of *incremental* (partial) and *fundamental* (complete) replacement of old metaphors by new ones.

The final dimension in the procedure is related to the semiotic mode in which metaphorical concepts have been identified. Therefore, we annotated whether metaphoricity was found in the textual mode (i.e., in the posts, hashtags or textual components (if any) of videos and/or images) or in the visual one (i.e., in videos or figures).

The results of the analysis are organised along the type of resistance dimension, thus answering RQ2. In each sub-section of the analysis a list of metaphorical conceptualizations is provided so as to answer RQ1.

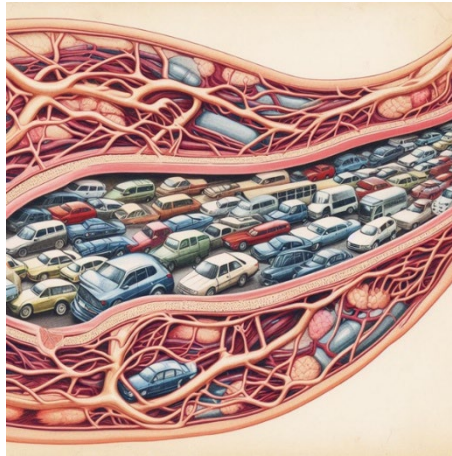
#### 4. Analysis

This section describes the resistance metaphors, both partial (section 4.1) and complete (section 4.2) found in our data of Spanish, English and Dutch-speaking cycling activists.

##### ***4.1. Metaphors of partial resistance: cycling in cities that are a space for moving***

As will be made apparent in this section, partial resistance metaphors in our data are mostly metaphors that challenge motonormativity both by exposing its drawbacks and/or by presenting cycling as a solution to them. The contemporary configuration of streets as “motor thoroughfares” (Norton 2011) is closely related to their metaphorical conceptualization as a circulatory system. In the dominant metaphor, cities are conceptualized as bodies and motorized traffic as the life blood of a city running through its veins and arteries (i.e., streets). Activists contest this conventional view of urban mobility by reframing cars as blood clots obstructing arteries, as can be observed in examples (1) and (2).

- (1) Nuestras ciudades están en un **estado continuo de trombosis**. [Our cities are in a **permanent state of thrombosis**.] [ES\_41]



**Figure 1. CARS ARE BLOOD CLOTS**

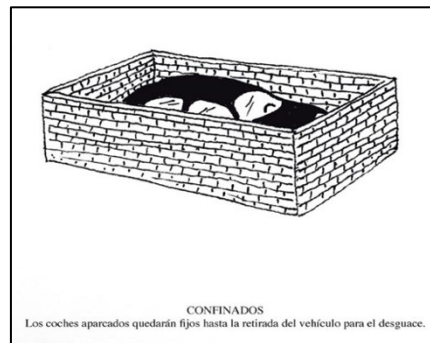
Source: Alejandro Cencerrado @ AlejandroCence2

- (2) Intentar resolver el problema de circulación de nuestras ciudades poniéndoselo más fácil a los coches es como **tratar una embolia quitándole la verdura al paciente**. [Trying to solve the traffic problem in our cities by making it easier for cars is like **treating a stroke by taking vegetables away from the patient**.] [ES\_40]

Lack of efficiency of the traffic system is traditionally blamed on poor or insufficient infrastructure. In contrast to this, cycling advocates present excessive motorized traffic as the cause of traffic infarction, thus highlighting its negative consequences for the health of the city, which, as stated in example (1), finds itself “in a permanent state of thrombosis.” Additionally, they reject solutions based on the building of new or wider roads by metaphorically pointing out that this would be an inefficient treatment for the health issues caused by cars (example 2) and would, in fact, make the condition worse.

Motorized mobility as an agent of disease travelling through the circulatory system and affecting the health of the city as a body takes other alternative metaphorical forms. In example (3) the image of a car surrounded by a brick wall and the word “confinados” (locked down) metaphorically foregrounds cars as virus or virus carriers, which, therefore, may have adverse effects on the health of city dwellers. This elaboration of the original metaphorical frame is contextualized in the recent COVID-19 health crisis and provokes a deep emotional response. This may also be useful in justifying public policies that aim to restrict motorized traffic while promoting a more sustainable reorganization of the urban space.

- (3) **CONFINADOS**. Los coches quedarán fijos hasta la retirada del vehículo para el desguace. [**LOCKED DOWN**. Cars will remain fixed until the vehicle is removed for scrapping. (ES\_012)]



**Figure 2. CARS ARE VIRUS CARRIERS**

Source: Genís @bicicletabcn

Examples (4) and (5) illustrate yet another variation on the conceptualization of cars as agents of disease. As noted in a previous study by Caimotto (2023b), traditional motorized mobility is often conceptualized as a drug addiction by the discourse coalition of cycling advocates. This idea is suggested in example (4) by the image of the baby smoking from the exhaust pipe of a car. The specific choice of tobacco as the drug depicted in the image allows the activist to resist the metaphors of traditional mobility under consideration: cars run through the arteries and veins of the city (i.e., streets), but cars are drugs, and their negative health impact (i.e., pollution) cannot be avoided because we are dependent on them. The representation of the baby as the drug addict further increases the emotional impact of the metaphor. Additionally, in line with Norton (2011: 4), the X post also questions Madrid city council's current mobility policies for favoring the "rhetoric of freedom" used by the automobile industry since the beginning of the 20th century over the health of the citizens.

- (4) Es una auténtica pena que el alcalde de nuestra ciudad haya decidido que la **salud** de nuestros hijos importa menos que la "libertad". [It is a real shame that the mayor of our city has decided that the **health** of our children matters less than "freedom".] [ES\_031]



**Figure 3. CARS ARE DRUGS**

Source: Alejandro Cencerrado @ AlejandroCence2

Example (5) foregrounds alternative attempts of city administrations to overcome this addiction as processes of “deautoxification” from car-dependency. As Caimotto (2023b: 58) explains, this metaphor highlights the negative consequences of motonormativity, such as the lack of an alternative mobility system, while presenting car users as victims (car-dependent) of the institutionalized mobility system. The metaphor is therefore useful in resisting the dominant positive view of cars as the life blood of cities while avoiding a narrative of confrontation between street users.

- (5) Las ciudades han emprendido un proceso de **desautoxificación**... [Cities have started a process of **deautoxification**...] [ES\_018]

Within the frame of the mainstream metaphors of cities as bodies and traffic infrastructure as circulatory systems, cycling activists sometimes turn to the notion of obesity to expose the drawbacks of motorized mobility and to resist the dominant metaphors that support it. To this end, both cars and traffic infrastructure are metaphorically rendered as obese people, as illustrated by examples (6) and (7):

- (6) **Auto-obesidad**: ¿Qué hacer con los SUV en las ciudades? [**Auto-obesity**: What to do with SUV in cities?] [ES\_009]  
(7) By creating a **road diet** that narrows traffic to one lane while simultaneously adding rain gardens [...] [ENG\_006]

Example (6) presents large vehicles, especially SUVs, as analogous to obese individuals. They take up more urban space and consume more resources (i.e., excessive amounts of fuel). Their overconsumption is detrimental to the environment and socially unsustainable just like obesity is bad for human health and costly for healthcare systems. An obese person may also struggle with mobility and efficiency, mirroring how large cars, especially in congested cities, make a higher contribution to slowing up and blocking the smooth flow of traffic. Far from being the life blood of the city, cars are presented as yet another agent of discomfort.

Traffic infrastructure itself, corresponding to the circulatory system in the dominant metaphor of cities as bodies, can also suffer from obesity. Example (7) suggests that current roads are too large (i.e., obese) hence resulting in an unbalanced distribution of the urban space. Therefore, just as a diet helps to reduce excess weight while bringing along important health benefits, a “road diet” can reduce the space dedicated to cars and allow for a more balanced (“healthy”) urban mobility design, as well as improving traffic flow and reducing pollution, with the effect of making urban areas more livable and enjoyable. The notion of “road diet” signals a shift on the perception of the city from being a space for moving from A to B, a view that has solidified in its metaphorical conceptualization as a circulatory system, to being a space for living (Te Brömmestroet 2020), as is reflected in the complete resistance metaphors analyzed in section 4.2.

The above partial resistance metaphors foreground motorized mobility as either a sick individual (i.e., CARS/TRAFFIC INFRASTRUCTURE ARE OBESE PEOPLE) or an agent of disease (i.e., CARS ARE BLOOD CLOTS/VIRUSES/DRUGS). In addition to

challenging dominant metaphors of traditional mobility, some of these contesting metaphors are aimed at highlighting the benefits of alternative sustainable types of mobility. As can be seen in example [8], cycling and cycling infrastructure are often metaphorically portrayed as potential healers of the present-day mobility system, which suffers from the conditions spelled out above.

- (8) ...Un cambio es **cirugía**, no **tiritas**. [Change is **surgery**, not **bandaids**.]  
[ES\_024]

While cycling is presented as a solution, how it is implemented also influences the configuration of the urban space. Example (8) evaluates two opposing stances on cycling infrastructure by Spanish cycling activists: “carrilbicistas” — those who advocate for different means of transport using separate paths within the city — and “calzadistas” — who claim that space shall be shared in the road between different means of transport. These diverse views underlie the use of the words “cirugía” (surgery), which refers to the calzadistas’ desire of a radical reconceptualization of the city as a shared space for all types of mobility; and “tiritas” (band-aid), a derogatory way of referring to the carrilbicistas’ shyer move of asking for segregated bike lanes. Despite the differences, both terms point to the healing nature of cycling infrastructure on the current unhealthy configuration of cities stemming from the dictates of motonormativity.

Opposition to traditional motorized mobility is also carried out by challenging dominant metaphors that conceptualize traffic infrastructure as a pipe rather than as a circulatory system, as is the case in example (9):

- (9) I’m not a regular visitor to Leeds, but **many of these roads I remember as being real traffic sewers**. [ENG\_009]

In the mono-functional conceptualization of the city as a place for transit, traffic has also been envisaged as flowing water and streets as pipes (Te Brömmelstroet 2020: 43). Example (9) illustrates how British cycling activists resist this metaphorical conceptualization of streets through the choice of an axiologically negative type of pipe (i.e., sewers), which triggers unpleasant inferences about the nature of the entities (i.e., cars) that flow through it.

All the examples shown in this section rely on a partial resistance to the mappings of the metaphorical conceptualizations that guide institutionalized and conventional thinking about mobility in the urban space. Still, this motonormative view of the city can be metaphorically challenged through the adoption of other metaphorical narratives.

#### ***4.2. Metaphors of complete resistance: cycling in cities that are a space for living***

As noted above, metaphors of complete resistance are those that challenge motonormativity by using alternative source domains for conceptualizing urban mobility. Two types of such metaphors have been identified in our data. First,

metaphors of opposition, which expose the prevalence of the car as the dominating means of transport (Stibbe 2014). These metaphors mainly construct a narrative in which a violent or asymmetrical relation is established between users of different means of transport, usually relying on a contested view of freedom of movement within the city. Second, metaphors of co-existence, which not only implicitly expose the existence of a car-infused discourse coalition, but which explicitly construct a metaphorical narrative in which the urban space can be effectively shared by all the people inhabiting it. The comparison between both types of metaphors shows how the discourse of cycling activists reflects the gradual changes in urban mobility. As noted above, this aligns with understandings of urban mobility shifting from segregationist approaches towards *multiautoculturalism* (Dawson, Day & Ashmore 2020).

#### 4.2.1. *Opposition-related metaphors of complete resistance*

Opposition metaphors in our data can be grouped along two parameters: (1) those that expose the prevalence of cars as the main (if not only) means of transport in the urban space and (2) those that challenge the pervasiveness of cars by advocating for other means of transport. Both types reframe metaphorical thinking about mobility by (implicitly) exposing the existence of motonormative thinking. As such, cycling activists frequently present cars as a ruling entity that “dominates” space as if it were their kingdom, as in (10). The use of such metaphor exposes the existence of an “automentality” (Walks 2015, cited in Caimotto 2023a) and attempts to reframe urban mobility by foregrounding the existence of a “dominant” discourse — and way of thinking — which reflects values (‘a car reign’) opposed to the ones held by cycling activists. As noted by Te Brömmelstroet (2000: 27) this is one of the possible strategies that can be used by peripheral discourses to oppose the dominant thinking of discourse coalitions. Only if such symbolic car rule is exposed, will people be able to challenge it.

(10) ... una vía lenta cedida total y absolutamente al **dominio** del coche [...] Y donde solo hay coches, donde **reinan** las cuatro ruedas... [a slow way yielded in its entirety to **car dominance**. [...] And where there is only cars, where four wheels **reign**...] [ES\_008]

Example (11) relies on the same metaphorical conceptualization of cars as a ruling entity whose mandate is to be unquestionably followed. This example shows an interesting combination of two types of figurative framing: metaphor and irony (Burgers, Konijn & Steen 2016). While the activist metaphorically conceptualizes cars as God (both textually and visually), the negative evaluation of cars as a means of transport is emphasized by contrasting social beliefs about the positive outcome of being penitent (in “sagradas penitencias”) with social beliefs about the actual penitence endured by car users. These are subsequently explained in the thread following (11): traffic jams; expenditure on traffic fines, taxes, car reparation and gas; lack of parking spaces; environmental effects and sedentarism. Ironic

metaphorical reframing proves to be an interesting strategy for attacking “established expectancies or norms” (Burgers, Konijn & Steen 2016: 416). It presents automentality as a defective type of thinking and inferentially stresses the need for alternative conceptualizations and configurations of the urban space, which is desirably to be occupied by means of transport other than cars.

- (11) En el principio de los tiempos modernos el coche nos fue entregado y con él vinieron las **sagradas penitencias** a las que nosotros, **fieles seguidores del culto al coche**, nos sometemos con orgullo. [At the beginning of modern times, the car was given to us and with it all the **holy penitence** to which we, **faithful followers of the cult of car**, are proudly subjugated.] [ES\_07]



Figure 4. CARS ARE GOD.

Source: Alejandro Cencerrado @ AlejandroCence2

In the first group of opposition metaphors the need for new means of transport inferentially stems from the opposition to motonormative thinking. In contrast, there is a second group of metaphors which explicitly foregrounds the existing opposition between car mobility and users of other means of transport, most notably cyclists. Previous studies have identified “bikelash” — i.e., the hostile reaction to cycling infrastructure and cyclists — as a common (discursive) process which results from asymmetric power relations between users of different means of transport (Caimotto 2023b: 54). When used by cycling advocates, opposition metaphors of this type reframe such power relations by rejecting car dominance and contrasting it to reconceptualized understandings of the notion of “freedom”. In (12), the textual opposition between “hostage” and “freedom” foregrounds the prototypical attributes of the latter: if car users understand freedom as an individual’s ability to go from A to B when and as desired (Te Brömmelstroet 2020: 30–32), cycling advocates connect freedom to the human ability of experiencing life.

- (12) In car-free cities, residents are no longer held **hostage** by cars. They are given *the freedom* to experience the city on a human scale. [NL\_01]

War-like metaphors, as the one in the example, construct the city as being dominated by an adversarial relationship between two sides (Caimotto 2023b). This power relation is asymmetrical, with cars metaphorically depicted as privileged people [NL\_008], stalkers [ES\_019], dictators and oppressors [ES\_011]; and cyclists as their victims. This justifies the call for segregated spaces, traditionally organized around the dominance of the car. Example (13) foregrounds the need for cycle tracks to protect cyclists from the violence exerted upon them by drivers.

- (13) In Amsterdam last week me and my young daughter were able to cycle side by side on **protected cycle** tracks all over the city. Many of these did not exist even a few years ago, as Amsterdam has a policy to *remove space from cars and reallocate it to cycling and walking* [ENG\_005]

The metaphorical war-like scenario of urban mobility also allows activists to offer a negative representation of conventional motorized mobility. Thus, traffic is personified as an angry, aggressive person that needs to be calmed, as in (14).

- (14) La habitabilidad urbana está en los detalles. Ejemplo de las aceras continuas y puertas de entrada a las calles tranquilas del modelo de accesibilidad y **pacificación** de tráfico holandés. El coche es un invitado en estas calles, no el protagonista. [Urban livability is in the details. Example of the *continuous sidewalks and gateways to the quiet streets* of the Dutch model of accessibility and traffic **calming**. *The car is a guest in these streets, not the protagonist.*] [ES\_031]

As illustrated by the words in bold type in (13) and (14), activists point to the reorganization of the urban space as a solution to end this adversarial relationship between different mobility types. Such reshaping of the urban space involves new forms of co-existence that also find a metaphorical expression as will be shown in the next section.

#### 4.2.2. Metaphors of complete resistance advocating for a shared use of space

Advocating for cycling as a means of sustainable mobility does not only reflect the core beliefs of a peripheral discourse coalition but it also reveals changes in conceptualizations of the city. In (15) and (16) the use of the words “monocultivo” (single crop farming), or “lush” foreground the existence of a natural system in which multiple species co-exist and an urban landscape in which multiple uses of space are integrated. This idea is not only textually enhanced, but such a worldview is frequently supported by photographs of cities where transportation paths are surrounded by green (leafy) areas.

- (15) ...necesita una ciudad para abandonar el **monocultivo del coche privado**. [which a city needs so as to abandon **private-car single crop farming**]. [ES\_030]



- (16) ...it began a **metamorphosis** (*sic*) **into a lush** and leafy multi-modal corridor, with dedicated bus and cycle lanes, and space for walking and seating. [NL\_022]

The use of the word “metamorphosis” in (16) highlights the idea of change in the city by relating it to the natural and rapid change undergone by some animals. This reflects an alternative means of thinking that considers the existence of species other than humans (as is advocated for in ecolinguistics research (Stibbe 2015)). It also presents it as the “natural” shape of the city, implicitly comparing it to the “artificial ecosystem” (Schliephake 2020: 6) which characterizes contemporary cities. A similar idea can be seen in (17) where a political call is made for (human) social actors to revert the artificial spatial configuration of cities and return to the natural ecosystem.

- (17) We’re witness the *deliberate* construction of a great cycling city [...] but this is *created* by political intent, not somehow ‘**indigenous**’. [ENG\_007]
- (18) Su enfermiza obsesión por meter a todos sus iguales en **rediles-bici**, le impide tener una visión más amplia de la Movilidad. [Their unhealthy obsession for putting all their equal peers in **bike-sheepfold** does not allow them to have a wider vision of Mobility] [ES\_025]

Criticism of the artificial organization of urban spaces can be also observed in the use of the word “redil” (sheepfold) in (18). This word triggers an implicit comparison between the open, free space that should be the city, and the constrained “unnatural” means of mobility presented by separate roads and lanes within a city. This metaphor, together with a call for a wider vision of mobility, reflects the need to go beyond the spatial battle and this advocate’s attempt to move away from segregation of lanes as the only possible solution. It shall be noted that this metaphor closely reflects the opposing worldviews of the two groups of Spanish cycling activists (i.e., “carrilbicistas” and “calzadistas”). Metaphorically presenting cycling lanes as sheepfolds stresses the artificial nature of such spaces and the need for a different pattern of space allocation in the city.

Likewise, conceptualizations of the city as an ecosystem allow us to metaphorically signal problems in how cities are organized and possible solutions to such problems. As can be seen in (19), the framing of cars as an “invasive species” not only highlights its artificial and fake status as the prototypical means of moving in a city, but it also stresses the need to look for alternative solutions when promoting sustainable mobility. Amongst such possible solutions, the use of the word *Bicienjambre* (bike swarm) in (20) can be mentioned. This word is frequently used to refer to a type of protest organized by cycling advocates, and it encapsulates a view of the city in which multiple species can co-exist<sup>1</sup>. The choice of the word “swarm” to refer to cyclists also stresses their perception of being

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<sup>1</sup> Further information about what a Bicienjambre is can be found in the following entry of their blog: <https://bicienjambre.blogspot.com/2012/10/que-es-bicienjambre.html>

“small” compared to motorized means of transport, the difficulty of seeing individual bees/cyclists on their role, and the important function of each of those individual cyclists in achieving the goal of sustainable mobility. These ideas are foregrounded in the video that accompanies the post and in the poster used to advertise the protest (in Figure 5). The image of a honeycomb stresses the individual existence of cyclists — one in each six-sided space — and their inextricable and necessary role in the configuration of the honeycomb (protest) as a unit.

- (19) Testament that even to the keen eye, car-free feels like the natural state of cities. It just takes courage to push **the invasive species out**. [NL\_005]
- (20) Así fue el **Bicienjambre** que hicimos junto @murciaenbici. Más de 100 bicicletas desde distintos puntos de la ciudad para terminar apoyando al evento de “Street for kids” [The bikeswarm organized with @murciabike was like that. More than 100 bicycles from different places in the city ended up showing support for the event “Street for kids”] [ES\_043]



Figure 5. Bicienjambre. MurciaLab (@murcia\_lab) and Murcia en bici (@murciaenbici)

A similar focus on the existence of shared spaces where multiple means of transport could co-exist can be seen in metaphorical conceptualizations of the city as a house. As in most complete resistance metaphors, through the lexical metaphor “guests” a new type of relationship is established between various means of transport. As seen in (21), discourse in the Netherlands has evolved, reversing the

former relationship between cars as owners of a city which bikes could visit to the current understandings of “fietsstraaten” (cycle-streets), usually painted in red, which are conceived as being mainly allocated to bikes but in which cars can move by adapting their behavior to that of bikes.

- (21) Bicycles used to be the **guests** on this street in Utrecht. Nowadays, as seen in the 2nd photo, *the prominent red asphalt* highlights the role of the ‘*fietsstraat*’ (cycle-street): cars are **guests**, and bikes have priority. [NL\_023]

The use of the lexical metaphor “guest” to describe behavior in the streets also ties in with conceptualizations of the city as a house. Interestingly, this conceptualization not only reflects the activists’ view on mobility, but it also raises broader questions about what cities are and how they are to be conceptualized (Varzi 2021). As can be seen in (22) and (23), cycling advocates foreground different parts of the house to indicate the desired functions of the city. Metaphorically describing a parking space as a “trastero de coches” (storage room for cars) stresses the absurdity of using the urban space for leaving unused things — cars. In contrast, in (23) the city is presented as a “living room”, i.e., the place in the house where people sit, relax and have a good time.

- (22) Esto también es #Amsterdam. Los 80 trajeron una ciudad pro-coche y aquí siguen los resquicios. Por fortuna, este “**trastero de coches**” es el único de todo mi barrio. [This is also #Amsterdam. The 80s brought a pro-car city and here are the traces. Luckily, this “car storage room” is the only one in my neighbourhood.] [NL\_025]
- (23) Now, the deafening noise and choking fumes have been replaced with humans young and old—the space transformed into the **living room** of the city. [NL\_020]

This last example focuses on the human traits of cities by inferentially singling out that cities are inhabited by people — humans — that live in them. As such, metaphorical choices are related to metonymy by highlighting the importance of different components (people vs. means of transportation) of the city.

## 5. Discussion

The discourse coalition of Spanish, English and Dutch-speaking cycling activists displays a rich collection of partial and complete resistance metaphors to communicate their core beliefs about urban mobility. These metaphors also reflect a shift in the notion of the *city*, including its purpose and its internal spatial organization. Such changes go from conceptualizations of the city as a place for moving to a place for living.

Partial resistance metaphors re-contextualize conventional cognitive mechanisms, and they contest the traditional conceptualization of the city as a place designed for people to move from one place to another. Thus, they resist the dominant metaphors of motonormativity (i.e., city as a body, traffic as its

circulatory system, or streets as pipes) by elaborating on their source domains to negatively depict motorized mobility as a metaphorical agent of disease (virus, drug), a health condition (obesity), or sewer. To address these mobility problems, cycling is metaphorically rendered as a potential solution (i.e., cycling infrastructure as band-aids/surgery). Partial resistance metaphors are designed to provoke negative emotional reactions towards traditional mobility (as shown in examples 3 and 4). As such, these metaphors present sustainable alternatives that can lead the way to new ecological narratives. Such changes in public discourse can cause a positive impact on public opinion and eventually result in an increase in the acceptance of pro-cycling policies.

The elaboration of the original metaphor (traffic as a circulatory system) opens new mental paths to the search of mobility solutions. The traditional metaphor promoted the development of infrastructure and the building of wider roads to solve current traffic jams; however, as the activist in example (2) points out, this will only make the condition worse, being paramount to giving the wrong diet to a patient with a stroke. On the contrary, cutting down on motorized traffic appears as a more effective move as it removes the cause of the coronary blockage. This new ecological narrative can help justify public policies directed at reducing motorized traffic, which will no longer be negatively framed as restrictions on the “life blood of the city” with the subsequent risk of popular opposition (Caimotto 2023a: 194), but rather as a possible solution to the “coronary disease” (i.e., lack of traffic efficiency) that cars themselves cause.

In line with previous findings by Caimotto (2023b), the new pro-cycling narratives stemming from the partial resistance metaphors are also effective in avoiding a sterile confrontation between the different users of the street. This is achieved by presenting car drivers as (dependency) victims of traditional mobility rather than responsible agents for the current unsustainable situation (as shown in examples 4 and 5). Partial resistance metaphors contribute to creating alternative narratives whose focus is on justifying new public policies favoring the use of bikes, and presenting them as an improvement for all users. Such narratives also construct agentless drivers who just suffer from illnesses caused by motonormativity. This makes it possible to discursively justify drivers also benefitting from public policies promoting cycling, as this can help them in their *deautoxification* process (example 5). Adopting this perspective may help to increase public acceptance of the necessary changes in urban mobility that will eventually result in more sustainable and livable cities.

Complete resistance metaphors can be of two types. First, opposition metaphors which challenge motonormativity by conceptualizing the city as a place where multiple users are opposed. By relying on cultural frames, they expose the existence of motonormative thinking (i.e. CARS ARE GODS, in example 11) or they explicitly foreground an adversary relation between drivers and cyclists (i.e., war metaphors). Such opposition metaphors are mainly aimed at showing the existence

of “bikelash” (Caimotto 2023b) and at exposing the asymmetric relations that exist in our cities.

A second type of complete resistance metaphors has been also found. These go beyond resisting old conceptualizations of the city and its mobility, and they propose alternatives by reconceptualizing the city as a place for living (i.e., ecosystem, house). Additionally, its internal organization can be observed to develop from initial segregationist designs (protected cycle tracks) to an *automulticultural* space where different types of mobility can co-exist.

Complete resistance metaphors are more critical in that they fully reject previous narratives and propose alternative ecological conceptualizations of the city and its mobility systems. They do not try to patch the problems of traditional mobility, as was the case with partial resistance metaphors, but rather offer visions of a new urban structure that is free from those weaknesses from scratch. Also, in contrast to partial resistance metaphors, opposition-related complete resistance metaphors do not even attempt to avoid confrontation between users of different means of transport. Alternatively, the reorganization of urban space is proposed as a solution to this adversarial relationship by creating new conceptualizations of the city. These new metaphorical narratives are related to what is known as “ecological urbanism” (Hagan 2015, Schliephake 2020) and to its view of the city as a literal and metaphorical ecosystem.

The metaphorical conceptualizations of the city as an ecosystem, a multicultural space or a house reflect wider changes in how urban space is understood. When trying to define what a city is, Varzi (2021: 405) argues that these are not enduring objects, but processes. As such, a clear shift can be seen from the city as space for moving — i.e., efficiently going from A to B — to a space for living. While the narratives stemming from partial resistance metaphors offer justifications for and promote acceptance of pro-cycling mobility policies within the existing urban configurations, complete resistance metaphors provide us with brand new stories of more sustainable and ecological cities that we can bike and live by.

## 6. Conclusion

This paper has identified a collection of metaphors used by Spanish, Dutch and UK cycling advocates to resist current unsustainable urban models and mobility systems. For centuries, traditional motorized mobility has weaved its own beneficial metaphorical narrative. We have lived by this harmful motonormative story, whose deep linguistic and conceptual roots make it almost unquestionable. Unveiling the resistance metaphors that articulate the counter-discourse of cycling activists may be useful to draw attention to the lack of ecological awareness in motonormative thinking, to mobilize people, and to ease the development and implementation of new urban mobility policies. Wackers and Plug (2022) share the view that preserving and extending the source domain of the dominant metaphor is an effective strategy to reveal its biases, as supported by some experimental studies

(Mio 1996, Landau et al. 2017). Further experimental research, however, is needed to compare the effectiveness of partial versus complete resistance metaphors in new sustainable mobility policy campaigns. However, it is beyond the scope of the present study to investigate the extent to which cycling advocates in different countries use a variety of metaphors and how these relate and are adapted to prominent social attitudes towards urban mobility in those contexts. Such an approach would also help to design tailored-made narratives with a higher likelihood of success in the implementation of sustainable mobility policies. Our study is a first, identificatory, step in the search for more ecological narratives to be used in public discourse. Likewise, this work raises questions of a more theoretical nature about the type of figurative language that is used to frame the relationship between mobility and the urban space, and it opens further avenues for research on the interaction between metaphor and metonymy and metaphor and irony.

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