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How Inflation *devoured pensions* and *added fuel to the fire* in Poland's and the USA's Economy Between 2022 and 2024: A Contrastive Cognitive-Linguistic Analysis[1]

SUMMARY
The paper presents a contrastive cognitive-linguistic analysis of metaphorical portrayals of inflation in Polish and American English financial discourse (2022–2024). Integrating Talmy's (1988, 2000) force dynamics and Kövecses's (2020) extended Conceptual Metaphor Theory, it examines corpus data from *money.pl* and *money.com*. The study traces patterns across schematic levels – from image schemas to mental spaces – highlighting how inflation is metaphorically construed. Through a qualitative analysis of collocations and metaphorical expressions, the paper identifies shared and divergent cognitive models shaped by cultural context. The findings underscore how metaphor structures economic discourse and how it reflects differing national responses to inflationary pressure.

KEYWORDS
conceptual metaphor; levels of schematicity; force dynamics; inflation

1. Introduction

Inflation is defined as a general increase in the prices of goods and services in an economy, leading to a decrease in the purchasing power of money[2]. In the context of high inflation, the purchasing power of savings is diminished, the cost of living is elevated, and economic uncertainty is exacerbated. For households, this may result in increased costs of food, energy, and services, potentially leading to a reduction in consumption and a shift in lifestyle patterns.

[1] The authors gratefully acknowledge the anonymous reviewer for their insightful and constructive comments, which have significantly improved this article. All remaining errors and omissions are the sole responsibility of the authors.

[2] See, https://www.money.pl/gospodarka/inflacjabezrobocie/edukacja/inflacja/

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From an economic perspective, inflation exerts a significant influence on macroeconomic stability, borrowing costs, and investment decisions. When moderate and predictable, it can support economic growth; however, if it becomes excessively high, it may lead to a slowdown in growth and an increase in unemployment. From a social perspective, inflation has the potential to exacerbate existing inequalities, with lower-income groups being particularly vulnerable to increases in the prices of basic goods. Consequently, effective monitoring of inflation and the implementation of appropriate economic policies are imperative for ensuring societal stability and prosperity.

Since the outbreak of the war between Russia and Ukraine at the end of February 2022, both Poland and the United States have witnessed a precipitous escalation in inflation. However, the dynamics and scale of this phenomenon differed due to the distinct characteristics of their economies and the monetary policy strategies adopted. In Poland, the initial inflationary shock was particularly severe, with the average annual consumer price index (CPI) reaching 14.4% by 2022, marking a dramatic increase from 5.1% the previous year[3]. The fundamental catalysts for this upsurge were the escalating costs of energy and food, consequent to the disruption of global supply chains and price deflation.

In the ensuing months, the rate of inflation in Poland underwent a gradual decline, still remaining at a relatively high level. According to data provided by Statistics Poland (Pl. *GUS*), the average annual inflation rate decreased to 11.6% in 2023. By December of that year, the Consumer Price Index (CPI) stood at 6.6% year-on-year, indicating a gradual deceleration in price growth[4]. Projections for 2024 indicated the likelihood of a continuation of the trend of disinflation. According to projections by the National Bank of Poland (NBP) in November 2023, inflation was predicted to attain 4.6% in 2024 and decline to 3.7% in 2025[5]. However, the subsequent analysis of the actual data set yielded results that were more optimistic. According to Statistics Poland, year-on-year inflation in December 2024 was recorded at 4.7%, while the average annual inflation rate for 2024 decreased to 3.6%[6].

In the United States, the initial increase in inflation was somewhat less pronounced. By mid-2022, the annual inflation rate had reached approximately

[3] See, https://stat.gov.pl/obszary-tematyczne/ceny-handel/wskazniki-cen/wskazniki-cen-towarow-i-uslug-konsumpcyjnych-w-grudniu-2022roku,2,134.html?pdf=1#:~:text=roku%20wzros%C5%82y%20o%2016%2C6,poprzedniego%20wyni%C3%B3s%C5%82%2014%2C4%25

[4] See, https://www.bankier.pl/wiadomosc/GUS-rewiduje-szacunki-CPI-za-grudzien-2023-roku-8678861html#:~:text=Tym%20razem%20by%C5%82%20to%20wzrost,roku%20wynios%C5%82a%2011%2C4%25

[5] Cf. https://strefainwestorow.pl/wiadomosci/20231110/inflacja-cpi-w-polsce-w-24-wyniesie-46-proc-w-25-obnizy-sie-do-37-proc-projekcja

[6] See, https://stat.gov.pl/obszary-tematyczne/ceny-handel/wskazniki-cen/wskazniki-cen-towarow-i-uslug-konsumpcyjnych-w-grudniu-2024-roku,2,158.html

9.1%.[7] The U.S. economy, already weakened by the effects of the Covid-19 pandemic, was further impacted by the global disruptions caused by the war in Ukraine. In response to the mounting inflationary pressures, the Federal Reserve implemented an aggressive interest rate hike strategy, which helped to reduce price pressures to around 3.4% by 2023[8]. The ongoing process of monetary tightening resulted in inflation approaching 2.9% year-on-year by 2024[9].

Despite encountering analogous external inflationary pressures, the two countries pursued divergent strategies to achieve price stabilization. Poland, whose economy was particularly sensitive to increases in commodity and energy prices, initially recorded higher inflation rates. However, the global decline in energy commodity prices and the subsequent appreciation of the Polish zloty contributed to a gradual easing of price pressures. Furthermore, diminished domestic demand led to a reduction in upward pressure on prices, whilst competitive pricing in the retail sector contributed to the stabilization of numerous goods and services. In contrast, the United States experienced a favourable outcome due to the Federal Reserve's decisive actions, which facilitated more expeditious control of inflation and consequently yielded lower inflation rates in subsequent years.

The following paper examines metaphorical conceptualizations of inflation in Polish and English financial discourse, paying particular attention to cultural and linguistic differences in the perception of this economic phenomenon. The analysis is based on the texts published between March 2022 and the end of 2024. This timeframe is not coincidental — the analysis begins shortly after the outbreak of the war in Ukraine in February 2022, which triggered a rapid rise in prices and led to a record-high inflation in Poland and in the USA. During this period, inflation became one of the most pressing economic and social issues, prominently featured in public debate. By contrast, the end of 2024 marks a significant decline in inflation rates and a return to levels considered acceptable. Comparing how inflation is conceptualized in Polish and (American) English provides insight into how the intensity and societal perception of the phenomenon shape its linguistic representation.

Our research questions are as follows:

1. How are metaphorical conceptualizations of inflation construed in Polish and English?
2. What are the differences and similarities in the metaphorical portrayal of inflation across the two languages?

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[7] See, https://www.bls.gov/opub/ted/2022/consumer-prices-up-9-1-percent-over-the-year-ended-june-2022-largest-increase-in-40-years.htm

[8] See, https://www.bls.gov/opub/btn/volume-13/a-year-in-review-exploring-consumer-price-trends-in-2023.htm

[9] See, https://www.bls.gov/opub/ted/2025/consumer-price-index-2024-in-review.htm

2. Theoretical framework

The research on cognitive linguistics has long recognized the centrality of embodied experience in structuring meaning (Gibbs, 2005; Johnson, 1987; Kövecses, 2020; Lakoff & Johnson, 1999; Littlemore, 2019, among others). Johnson (1987, p. 126) introduced a "highly selective" list of twenty-seven image schemas that are "pervasive, well-defined, and full of sufficient internal structure to constrain our understanding and reasoning." Among these, six schemas represent gestalt structures of FORCE: COMPULSION, BLOCKAGE, COUNTERFORCE, RESTRAINT REMOVAL, ENABLEMENT and ATTRACTION. In Johnson's (1987, 2007) account, these force-related schemas arise from recurrent patterns of bodily experience involving resistance, pressure, movement, and enablement, which structure not only our perception of physical interactions but also our understanding of abstract processes. They capture the embodied logic of how forces operate, interact, and produce change, serving as foundational structures that underlie metaphorical reasoning about causation, effort, and resistance in both physical and abstract domains.

While Johnson's (1987, 2007) work was seminal in revealing the embodied and experiential grounding of meaning and the metaphorical structuring of force, Talmy (1988, 2000) offered a more fine-grained and dynamic account of how forces interact conceptually. His force-dynamic framework specifies the relational configurations between entities exerting or resisting force, thus providing a systematic model for analysing causal interactions and event construals.

The analysis conducted in this paper of how inflation is construed metaphorically in English and in Polish draws on a synthesized theoretical framework that integrates Talmy's (1988, 2000) force dynamics with Kövecses's (2020) extended Conceptual Metaphor Theory (extended CMT). Such a theoretical approach offers a more dynamic, interactional model for analysing language, thought, and conceptualization, and is particularly well suited for the concept of inflation, which – albeit abstract – is seen and construed as a dynamic entity crossing multiple boundaries of different domains and giving rise to a complex conceptual portrayal both in English and in Polish.

Let us briefly review each of the two frameworks before presenting how they are combined for the purpose of the ongoing analysis. Talmy (1988, 2000) introduced force dynamics as a way of conceptualizing events not merely in terms of motion but in terms of force interactions between entities. The framework posits two main participants in any force-dynamic scenario: the Agonist (the focal entity) and the Antagonist (the opposing force), each having an intrinsic tendency either toward action or toward rest (see, Talmy 2000, pp. 413–414). The resultant state (action or rest) depends on the relative strength and intrinsic tendencies of these forces. Force dynamics extends beyond the physical domain to encompass psychological, social, and modal expressions, including those of metaphorical nature. Talmy's

work has thus broadened our understanding of causation, agency, and resistance in language. Furthermore, Talmy's (1988, 2000) idea of force dynamics provides a more complex understanding of the well-grounded conceptualization of causation in CMT, namely CAUSES ARE FORCES (Johnson, 1987; Kövecses, 2018; Lakoff & Johnson, 1999). The importance of the concept of force dynamics has widely been acknowledged by other scholars, who have incorporated the idea in their research, such as Turner and Fauconnier (1995) in their discussions of how conceptual spaces interact and merge in metaphorical thought, Semino (2008) in her work on how metaphors of illness and recovery are shaped by the physical force relations, Gibbs (2005) in his studies on conceptual metaphors related to emotion, social interactions and mental states or Hart (2011) in his research on ideological qualities of force-dynamic conceptualizations in immigration discourse.

Kövecses (2020), in turn, proposed an extension of Lakoff and Johnson's (1980/2003) conceptual metaphor theory, addressing some of its major limitations, such as insufficient sensitivity to context, cultural variation, and the static, one-directional mapping between source and target domains. His updated model introduces four levels of schematicity within conceptual structure, which include, from the most to the least schematic:

1) image schema,
2) domain,
3) frame,
4) mental space.

Although each of these notions is grounded in earlier cognitive linguistic research, Kövecses (2020) reinterprets them within a unified, hierarchical system. Each level represents a distinct degree of schematicity, ranging from the most general, embodied structures of meaning to the most specific, context-bound instantiations of conceptualization.

At the highest level of schematicity lies the image schema, understood as a recurring, analogue pattern emerging from embodied sensorimotor experience (Johnson, 1987; Lakoff & Johnson, 1999). Image schemas – such as PATH, FORCE, CONTAINER, BALANCE, or CYCLE – capture pre-conceptual gestalts that structure how humans perceive and reason about both physical and abstract phenomena. In Lakoff and Johnson's (1980/2003) original formulation of CMT, image schemas served primarily as structural sources for metaphorical projection from concrete to abstract domains. In contrast, Kövecses (2020) situates them as the foundational schematic level within a vertical hierarchy, forming the conceptual bedrock that constrains and motivates lower levels, such as domains and frames.

The second level, the domain, is more specific but still schematic. Following Langacker's (1987) definition, a domain constitutes a coherent conceptual area that organizes knowledge and meaning, such as JOURNEY, BUILDING, or

WAR. In classical CMT, conceptual metaphors are defined as mappings between such domains (e.g. LIFE IS A JOURNEY). Kövecses (2020), however, extends this view by integrating domains within a broader network: they are motivated by image schemas and elaborated through frames, thereby mediating between embodied experience and culturally shaped conceptual structures.

Frames occupy the third level of schematicity. Building on Fillmore's (1982) and subsequent frame-semantic work, frames specify structured scenarios within a domain, defining participant roles, relationships, and event sequences. For instance, within the JOURNEY domain, frames such as departure, path following, or arrival provide fine-grained conceptual organization. Whereas early CMT often treated such role-structure implicitly within domains, Kövecses (2020) distinguishes frames as a separate level that connects the relatively abstract knowledge of domains to the contextually instantiated mental spaces of actual discourse.

At the lowest and least schematic level are mental spaces, temporary conceptual constructs that arise during online meaning construction (Fauconnier, 1994). Mental spaces are context-dependent, created dynamically in discourse, and populated with specific entities and events drawn from the more stable background structures of frames and domains. While traditional CMT emphasized stable, long-term mappings, Kövecses (2020) highlights the mental-space level as a means of explaining contextual variability and situational adaptation in metaphor use.

Image schemas, domains, and frames, which are conceptual structures stored in long-term memory, explain metaphorical meaning in general. These structures enable metaphors to be meaningful via embodiment and systematic mappings, which support inferencing across conceptual domains[10]. However, such general mechanisms cannot account for the contextually rich and dynamic nature of metaphor in real-time discourse. To address this, metaphor must be understood as operating at multiple levels, especially at the level of mental spaces. As Kövecses (2020, pp. 117–118) postulates, the level of mental spaces is where speakers:

- use metaphors online (i.e., produce and comprehend metaphors),
- use them in a fully contextualized way,
- use them with specific socio-pragmatic functions,
- add emotional value to them,
- create novel metaphors,
- use metaphors deliberately,
- create metaphors as a result of contextual priming,
- use individual metaphors,
- add lexical elaborations to frames,

[10] For the employment of levels of schematicity in financial discourse, see Duda & Nycz (2022), and for the employment of levels of schematicity in the conceptualization of verticality, see Konieczna (2020).

- perform conceptual integration,
- mix metaphors in the same discourse,
- and possibly several others.

Kövecses (2020) emphasizes the role of metaphorical creativity, conceptual integration, and embodiment, aligning well with the premises of force dynamics. The ongoing analysis takes into account this dynamic and context-sensitive nature of metaphorical meaning, which emerges from an interplay between entrenched metaphorical knowledge and specific usage contexts. Hence, in the analysis the focus is placed on the cross-linguistic interplay between particular levels of schematicity and force-dynamic scenarios[11].

3. Data and methodology

The corpus of data gathered for the analysis comprises online articles from the following financial portals: *money.com* for the English language data and *money.pl* for the Polish language data. The methodology employed involved searching for texts via the in-built search engines in the respective websites using the key words *inflation* and *inflacja*, followed by the manual extraction of relevant samples from the online portals covering the period between March 2022 and December 2024. The manual selection of texts was based on the presence of metaphorical potential in the article headlines. As a result, two corpora were built in the Sketch Engine platform. The corpus for Polish counts 76,192 words and that for English counts 49,131 words. The initial step in the analysis was the use of the Word Sketch function to compare and contrast the collocations of the lexeme *inflacja* in Polish and *inflation* in English, which are the keywords for further qualitative analysis.

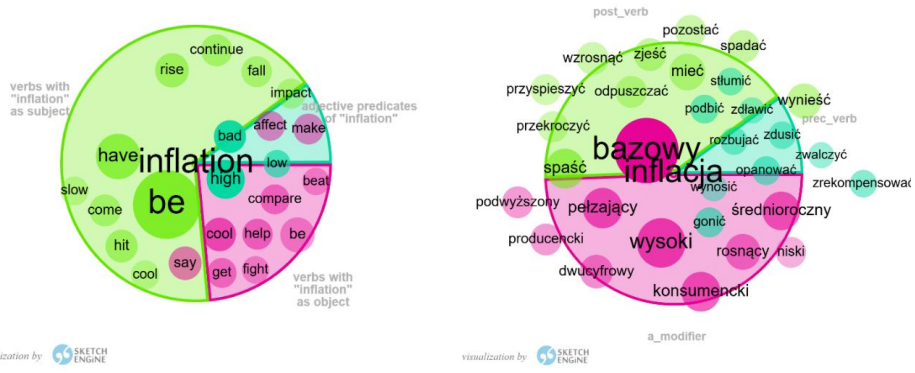

Figure 1: Word Sketch results showing collocations for Eng. *inflation* (on the left) and Pl. *inflacja* (on the right)

[11] For employment of Talmy's (1988) force dynamics and Kövecses's (2020) levels of schematicity in illness metaphors, see, for example, Kazemian et al. (2022).

Looking at the nature of the collocations presented in Figure 1, an observable difference is in the distribution of the structures. In Polish there is a much greater variety of adjectives describing inflation, namely *galopująca* 'galloping', *rosnąca* 'rising', *wysoka* 'high', *uporczywa* 'persistent', *krocząca* 'walking', *uciążliwa* 'burdensome', *spadająca inflacja* 'falling inflation', and others, whereas in English there seem to be just three adjectival modifiers, namely *high, low* and *bad.* When it comes to verbs, the contrast is equally striking. In English, inflation most often occurs as the subject of verbs denoting motion or change (*rise, fall, continue, slow, impact*), or as the object of verbs denoting control or management (*beat, fight, cool*). These patterns reflect a relatively constrained set of metaphorical framings, presenting inflation either as a driving force or as a problem to be solved. In contrast, the Polish data reveals a much broader spectrum of verbal collocates, particularly in constructions where *inflacja* 'inflation' is the object of strong, agentive verbs such as *zdusić* 'choke off', *stłumić* 'smother', *stłamsić* 'squash', *opanować* 'bring under control' and *zwalczyć* 'beat'. These verbs evoke a forceful, often violent, interaction with inflation, portraying it as an active opponent that needs to be suppressed. Additionally, Polish uses a wider array of motion verbs, such as *rosnąć* 'grow', *spadać* 'fall', *przyspieszyć* 'speed up', *hamować* 'slow down' and *gonić* 'chase' highlighting a more dynamic and embodied conceptualization.

Having analysed the verbal and adjectival collocations in both languages, we conducted a detailed qualitative analysis using three CQL formulae in each language. For the Polish data we used the following CQL formulae:

1) for inflation used as an agent conducting an action (1,065 hits) [lemma = "inflacja"] [ ] {0,3} [tag = "fin.*|bedzie.*|aglt.*|praet.*|impt.*|imps.*|inf.*|pcon.*|pant.*|ger.*|pact.*|ppas.*"] within <s/>;
2) for inflation used as an object undergoing action/state (754 hits) [tag = "fin.*|bedzie.*|aglt.*|praet.*|impt.*|imps.*|inf.*|pcon.*|pant.*|ger.*|pact.*|ppas.*"] [ ] {0,3} [lemma = " inflacja "] within <s/>;
3) for inflation described with an attribute (638 hits) [tag = "adj.*"] [ ] {0,3} [lemma = "inflacja"] within <s/>.

For English, we used the following CQL formulae:

1) for inflation used as an agent conducting an action (599 hits) [lemma = "inflation"] [ ] {0,3} [tag="V.* "] within <s/>;
2) for inflation used as an object undergoing action/state (429 hits) [tag="V.*"] [] {0,3} [lemma = „inflation"] within <s/>;
3) for inflation described with an attribute (278 hits) [tag="J.*"] [] {0,3} [lemma="inflation"] within <s/>

Next, having analysed the surrounding co-text for the keywords in both languages, we annotated each occurrence of the lexeme *inflation* and *inflacja* as metaphorical or literal. As a result, out of 2,457 hits in Polish 704 (29%), and out of 1,306 hits in English 510 (39%) were marked as metaphorical.

Metaphorical concepts illustrated in the examples extracted from the articles were then analysed and grouped in terms of their level of schematicity and their type of force-dynamic scenario. For example, within the general image schema of MOTION, whereby we conceptualize any change as movement or motion, we observe a number of domain level mappings, namely perceiving change in inflation value as moving up or down (vertical movement), as a journey (mostly horizontal movement), or conceptualizing inflation as an entity moving from one place to another. It is worth noting at this point that at these two more general levels of schematicity no force-dynamic scenarios are observed. Only when analysing the frame and mental space level, can we see how changes in inflation value are conceptualized as an entity which is falling, moving upwards or as an entity which is moved upwards by some force. To illustrate this, let us take an example from the Polish corpus:

> ***Inflacja*** *prawie na pewno* ***przebije kolejny sufit***. ('**Inflation** will almost surely **break through** another **ceiling**.')

It is the frame level, or even more specifically, the mental space level that shows clearly how force comes into play in the conceptualization of inflation. At the frame level we observe that a change in inflation value is perceived as a moving object, and at the mental space, context-bound, level it can be observed in more detail that a sudden and extreme change in inflation is conceptualized as a forceful movement of an object, which often breaks through surfaces on its way, such as a ceiling when inside, or breaks any obstacles in its way. Here, a physical barrier scenario is observable where inflation (Antagonist) is seen as an upward-moving forceful entity (object) which exerts pressure against a resisting structure, here the economy (Agonist) metaphorically seen as a container, with the ceiling being a part of this container.[12] The ceiling metaphorically represents a threshold or limit, such as target inflation rate, psychological or policy-bound maximum, and constitutes a barrier that attempts to block or limit inflation's upward movement. As the Antagonist (inflation) in this scenario is strong enough to break through, and hence to overcome, the Agonist's barrier (ceiling), the resultant state is a continuing rise of inflation, which also plays a narrative role of dramatizing inflation's agency and economic risk. Figure 2 below illustrates this example and the description of levels of schematicity presents how the mental space level interacts with this most schematic level:

[12] See, Kövecses (2020).

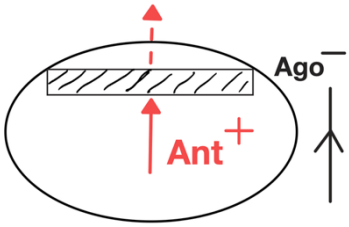

Figure 2: Force-dynamic barrier scenario, whereby the Antagonist overcomes the Agonist's barrier and continues to move[13]

Image schema level:
CHANGE IS MOVEMENT/MOTION

Domain level:
CHANGE IN INFLATION VALUE IS A VERTICAL MOVEMENT
(but also CHANGE IN INFLATION VALUE IS A JOURNEY, INFLATION IS A MOVING ENTITY, etc.)

Frame level:
CHANGE IN INFLATION VALUE IS AN ENTITY MOVING OR BEING MOVED UPWARDS
(but also CHANGE IN INFLATION VALUE IS A FALLING ENTITY, etc.)

Mental space level:
A SUDDEN AND EXTREME CHANGE IN INFLATION VALUE IS A FORCEFUL UPWARD MOVEMENT OF THE OBJECT THAT CAN BREAK AN OBSTACLE IN ITS WAY

As will be demonstrated in the examples below, it is at this most specific level of mental space that the interaction of forces in the conceptualization of inflation becomes most apparent. Based on the corpus data, inflation is consistently construed as the Antagonist, that is, the opposing force within the force-dynamic configurations.

[13] All figures representing force-dynamic scenarios in this analysis are inspired by Talmy's (1988, 2000) model, although they are not exact reproductions of his original diagrams. For the purpose of clarity and consistency, the present study employs simplified graphical conventions, using the following elements: Ant (Antagonist), Ago (Agonist), "–" (weaker entity), "+" (stronger entity), solid arrow (direction of actual force exertion), broken arrow (direction of potential force), line with a central dot (resultant state of rest), and line with a central arrowhead (resultant state of action).

4. Results and Findings

4.1 Motion scenario

A pertinent starting point for analysing the conceptualization of inflation is the image schema level of MOVEMENT/MOTION, to use Kövecses's (2017, 2020) typology. As Kövecses (2020) emphasizes, movement is one of the most fundamental cognitive structures underlying metaphorical thought. In our analysis, vertical orientation – typically expressed through the UP–DOWN schema – is frequently employed in both the visualization and conceptual understanding of inflation. Such spatial metaphors allow abstract economic processes to be structured experientially, drawing on embodied cognition to make inflation intelligible through familiar perceptual patterns. Here, quantity (e.g. numerical values) is conceptualized as vertical elevation in space, and may be formulated as a metaphorical extension at the domain level CHANGE IN QUANTITY IS A VERTICAL (UP/DOWN) MOVEMENT. In the case of inflation, these metaphors are further axiologically charged, resulting in a non-standard but highly stable variant: MORE IS BAD, LESS IS GOOD. While upward movement (UP) is conventionally associated with positive developments (e.g. Eng. *wage growth* vs. Pl. *wzrost zarobków*, Eng. *increase in efficiency* vs. Pl. *wzrost efektywności*), the metaphorical polarity is reversed in the context of inflation. Here, upward movement signals economic deterioration, encompassing a loss of purchasing power, instability, and perceived threat, whereas downward movement (DOWN) is seen as improvement and a restoration of economic balance.

As for the domain level, metaphorical expressions extracted from the Polish and English corpora, such as Pl. *inflacja poszybowała* vs. Eng. *inflation soared*, Pl. *inflacja pnie się w górę* vs. Eng. *inflation continued to climb*, Pl. *ścieżka inflacji zostanie znacząco podniesiona* 'the inflation path will be significantly raised' and Eng. *inflation topped* clearly place inflation within a vertical spatial domain. These examples illustrate the classical metaphorical mapping INCREASE IS UPWARD MOVEMENT. However, it is worth noting that many of these expressions also reflect the domain mapping INFLATION IS A MOVING ENTITY (e.g. Pl. *inflacja wspięła się na kolejny rekordowy poziom* 'inflation has climbed to another record high', *inflacja wchodzi na wyższy poziom* 'inflation is reaching a higher level', *inflacja odbiła się od dna/odbiła w górę* 'inflation bounced off the bottom/bounced upwards', *inflacja podskoczyła do poziomu 15,6 proc.* 'inflation jumped to 15.6 percent' and Eng. *inflation reaching its zenith of 13.5%*, *inflation reaches a peak*, *inflation jumped, inflation soared above 8%*). In such examples, inflation is conceptualized as an unrestrained, self-propelled force or an autonomous moving entity, whose upward trajectory unfolds without encountering any opposing resistance. This configuration corresponds to what Johnson (1987) described as a RESTRAINT REMOVAL force schema, in which

a previously inhibited or latent force becomes free to move once the constraining barrier is lifted. The absence of any active counterforce – or the dormancy of the opposing element – means that these metaphors instantiate a one-sided force structure rather than a dynamic interaction of competing forces. Consequently, such instances are more adequately accounted for by Johnson's image-schematic model of force than by Talmy's (1988, 2000) relational force-dynamic framework, since no explicit balance, opposition, or struggle between forces is represented.

On the other hand, Polish and English expressions, such as *inflacja zjechała poniżej zera* 'inflation slid below zero', *inflacja leci w dół o 10 pkt proc.* 'inflation is dropping by 10 percent', and *inflation falls back to*, *inflation has dipped below*, *inflation will drop* are grounded in the conceptual mapping DECREASE IS DOWNWARD MOVEMENT, which in this context – contrary to general spatial intuition – is positively charged, signifying economic improvement. Falling inflation is conceptualized as a return to stability.

Another domain-level realization of the image schema level of MOVEMENT/MOTION is the metaphorical mapping LIFE IS A JOURNEY, which is conceptually connected to the previously discussed vertical metaphors, while also extending them by incorporating horizontally oriented mappings. Within this broader spatial framework, the subdomain-level mapping INFLATION IS A TRAVELLER is frequently observed in the economic texts analysed. In these journey metaphors, inflation is conceptualized as a moving personified entity progressing along a path toward a defined goal. Expressions, such as Pl. *krocząca inflacja* 'walking inflation' vs. Eng. *inflation started creeping upwards*, Pl. *inflacja minęła już szczyt* vs. Eng. *inflation is nearing a (major) peak*, Pl. *inflacja kontynuuje marsz w górę* 'inflation continues its march upward', Eng. *inflation is moving in the right direction*, present inflation as a dynamic entity, moving through time and space. Like a traveller, inflation walks, marches, and reaches summits. References to the inflation target in Polish examples, like *sprowadzenie inflacji do celu NBP* 'bringing inflation down to the NBP's target' and *inflacja będzie schodzić do celu stopniowo* 'inflation will gradually descend to the target', construct inflation as a living agent that should reach a specific, predetermined endpoint – an abstract numerical goal set by the National Bank of Poland (NBP) or the Federal Reserve in the USA. These linguistic examples reinforce the narrative of inflation as a controlled, directional process. Such a conceptualization can also be accounted for in terms of the PATH image schema, which, according to image schema theory (Johnson, 1987; Mandler, 2004; Hampe, 2005), comprises three fundamental structural elements: SOURCE, PATH, and GOAL. Within this framework, inflation is metaphorically represented as an entity in motion that departs from an initial state (SOURCE), follows a trajectory determined by economic forces or policy measures (PATH), and ultimately aims to reach a stable endpoint – the target inflation rate (GOAL). The linguistic expressions depicting inflation as descending to or being brought

down to the target thus instantiate this embodied schematic pattern, grounding an abstract economic process in the spatial and dynamic logic of physical movement. In such cases, Talmy's (1988, 2000) force-dynamic configurations remain latent rather than explicitly realized, as the focus lies on directed motion and goal orientation, and not on interaction between opposing forces.

Yet another observation drawn from the analysis of both corpora is the image schema of OBJECT, within which the subdomain level metaphorical mapping is INFLATION IS A MOVING OBJECT. At the frame level, in turn, force-dynamic scenarios begin to be clearly visible. For example, expressions such as Pl. *inflacja się rozpędza* ('inflation is picking up speed'), *inflacja przyspieszyła* ('inflation has accelerated'), *czy ta inflacja będzie się jeszcze bardzo rozpędzać?* ('will this inflation continue to accelerate'), and Eng. *the inflation rates accelerate* conceptualize inflation as a moving Antagonist, typically framed as an uncontrolled or semi-autonomous object (akin to a vehicle) advancing forward. In Talmy's (1988, 2000) terms, the Antagonist (inflation) exhibits a force tendency toward action, while the Agonist, for example monetary policy or interest rate hikes, may either be absent or too weak to inhibit its acceleration. The resultant scenario indicates that the Antagonist's force either meets insufficient opposition or is actively propelled. This metaphor implicitly constructs inflation as dynamic and difficult to restrain, foregrounding the momentum of economic processes (see, Fig. 3).

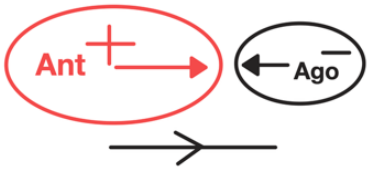

Figure 3: Force-dynamic scenario, whereby the Antagonist continues its motion despite the Agonist's opposing force

Other expressions, such as Pl. *inflacja hamuje* ('inflation is slowing down/braking'), *inflacja wystrzeli i gwałtownie wyhamuje* ('inflation will shoot up and suddenly brake'), *bardzo trudno jest zatrzymać inflację* ('it is very difficult to stop inflation'), Eng. *inflation has slowed down, inflation continues to slow* and *inflation began to decelerate*, further develop the force-dynamic scenario by framing inflation as a moving Antagonist whose motion is now being opposed. Here, economic policy measures function as the Agonist, attempting to halt or slow inflation's momentum. According to Talmy's (1988, 2000) model, the Antagonist's force tendency is to continue in motion (increase), while the Agonist's force is oppositional (e.g. interest rate increases). The resultant state depends on relative force strength: if the Agonist is strong, inflation decelerates; if it is weak, inflation

persists. These metaphors depict inflation as possessing inertia or forward drive, aligning with common experiential models of physical systems in motion (see, Fig. 4).

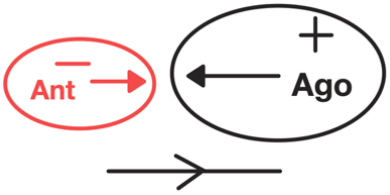

Figure 4: Force-dynamic scenario, whereby the Antagonist continues to move despite the Agonist's stronger opposing force

In turn, there are also examples, like Pl. *inflacja się nakręca* ('inflation winds itself up') and *ponowny mocny wzrost rozpędu inflacji* ('renewed strong momentum of inflation'), which provide linguistic evidence that inflation is portrayed as a self-propelling Antagonist – a system capable of generating and maintaining its own motion without an external driver. These expressions imply that inflation has become autonomous, difficult to contain, and potentially escalating unless met by significant intervention. From a force-dynamic perspective, this reflects a Talmyan configuration where the Antagonist is self-energizing and the Agonist is either absent, latent, or ineffective.

4.2. Inflation as a living entity

Within the domain level mapping INFLATION IS A LIVING ENTITY, we also observe a number of emotionally charged examples in both Polish and English, for which Talmy's (1988, 2000) framework of force dynamics seems to be particularly well suited and invaluable for a better understanding of the conceptual nature of inflation. While CMT accounts for the cross-domain mapping that structures these metaphors – projecting human characteristics and agency onto an abstract economic process – force dynamics captures their internal relational structure, that is the interaction between opposing forces within the conceptual scenario. In this sense, Talmy's model complements CMT by explicating the causal, directional, and kinetic dimensions of the mappings it describes. Interestingly, it is at the more specific level of frames and that of mental spaces that the force-dynamic scenarios are more clearly observed. For example, inflation is consistently framed as an Antagonist – an external, disruptive force threatening the status quo. The Agonist's identity (budget, business, political system, society) varies but is always in a weakened or threatened position. However, in Polish, the metaphors are more emotionally intense and frequently have terminal outcomes. The inflation force is metaphorically framed as a brutal, often unstoppable, force that actively harms vulnerable entities. It does not merely challenge but devours (*inflacja zżera*),

kills (*inflacja zabija*), finishes off (*inflacja dobija*) and destroys (*inflacja demoluje*) the Agonist (e.g. *emerytury* 'pensions', *piekarnie* 'bakeries', *małe i średnie firmy* 'small and medium-sized companies', as well as *arkusze kalkulacyjne producentów i sprzedawców* 'producers' and sellers' spreadsheets'). When we analyse the Antagonist's force by mapping its strength, tendency, and a resultant state across a few representative Polish examples, it is striking that the Agonist is almost always weak or weakened, with a tendency towards persistence. Inflation exerts such a strong and overwhelming force that the resultant state is action – a dynamic outcome manifested in the Agonist's yielding, collapse or destruction (see, Fig. 3).

In turn, the Antagonist's force in English examples is often temporarily dominant, but not absolute. Inflation, as an Antagonist, challenges rather than obliterates. It exerts pressure (*Inflation stresses retirees' budgets*), forces a negative effect (*High inflation also created hardships…*), resists control and remains unaffected (*Inflation doesn't care which political party is in charge*), takes revenge as a strong aggressive, returning force (*Inflation came back with a vengeance*), escalates an existing crisis (*Inflation is adding fuel to the fire*), and initiates action as a sudden, emerging force (*When inflation reared its head*). Unlike the Polish examples, the Agonists portrayed in English expressions appear stronger, or at least more active, as they attempt to maintain control or respond appropriately. The force-dynamic scenario here suggests a continuous struggle or pressure, rather than defeat or collapse.

4.3. War/Fight scenario

Another domain level mapping in which Talmy's force dynamics further enriches the understanding of metaphorical mapping, is WAR and FIGHT metaphors (see, Filardo-Llamas, 2021). In this context, inflation is usually framed as an enemy that must be fought (e.g. Pl. *walka z inflacją* 'battle with inflation'; *do walki z inflacją trzeba dwojga* 'it takes two to fight inflation'; Eng. *the Federal Reserve's battle with inflation; there are better ways for states to battle inflation*). In turn, the Polish metaphorically grounded expression *walka z inflacją będzie bolesna* 'the battle with inflation will be painful' emphasizes the cost of conflict, highlighting that fighting comes at a price and that battle is painful regardless of who is stronger. Applying Talmy's force dynamics theory reveals an interaction of two opposing forces, with inflation appearing as an Antagonist which inflicts pain despite resistance. The Agonist, though often undefined, is usually implicitly understood as society, who will suffer the painful effects of inflation. There are occasional instances in the corpora which clearly delineate the Agonist, such as Pl. *Polaków czeka cios inflacyjny rzędu aż 42 proc.* 'The Poles are awaiting an inflationary blow of as much as 42 per cent' and Eng. *There are also loans that come with low down payment requirements and no mortgage insurance costs,*

which may also soften the blow of inflation for qualifying buyers.

There is, however, a more positive image of forces resisting inflation which can be found in other English examples: *(...) allowing savers to beat inflation with a risk-free investment*, *Fed's capacity to tackle inflation* and *beating inflation may not be as hard (...)*. In Talmy's view, these metaphors consistently depict inflation as a resisting or harmful force that must be overcome or tackled. However, it appears weaker than assumed or equal to a strong Agonist (such as the Fed or an undefined entity like the government, economic policy or, a monetary tool). The resulting force dynamics favours the Agonist, portraying it as an agentive force with a positive direction, or at least as a potent and prepared entity capable of restraining inflation.

Similarly, metaphorical expressions, such as Pl. *odtrąbić odwrót inflacji* 'trumpet the retreat of inflation' and *inflacja była już w odwrocie* 'inflation was already in retreat', mark a shift in the balance of forces. They indicate a change from inflation being a dominant force (previously growing and attacking) to a weakening entity being pushed back. In Talmy's terms, the Antagonist's force (inflation) is now weaker than that of the Agonist, and the resultant state that this force-dynamic scenario produces is a backward motion of the Antagonist, indicating a positive economic development.

4.4. Fire scenario

Within the domain-level metaphor INFLATION IS FIRE, the Polish examples reveal a series of force-dynamic configurations capturing the tension between inflation's destructive energy and attempts at its containment, as exemplified below:

- *Inflacja **trawi** światowe gospodarki* (trans. Inflation is destroying the world's economies.);
- *Inflacji **zgasić** nie pomogła decyzja rządu* (trans. The government's decision did not help to put out inflation.);
- *(...) Partie polityczne w swoich działaniach prekampanijnych prawie w ogóle nie pokazują, w jaki sposób mają zamiar ją [inflację] **ugasić*** (trans. In their pre-election activities, political parties hardly show how they intend to extinguish inflation.);
- *Przez wiele ostatnich miesięcy rosły stopy procentowe, a wraz z nimi raty kredytów. NBP tłumaczył to koniecznością **stłumienia** inflacji* (trans. Interest rates have been rising over the past few months, and with them, loan instalments. The NBP explained this as a necessary move to smother inflation.);
- *Platforma Obywatelska ogłosiła w czwartek na regionalnym kongresie programowym projekt trzech ustaw, które mają pomóc **zdusić** inflację* (trans.

On Thursday, during its regional programme congress, the Civic Platform announced a draft of three laws intended to help choke off inflation.).

Expressions, such as *inflacja trawi światowe gospodarki* ('inflation is destroying the world's economies'), instantiate a force-dynamic scenario, in which the Antagonist – inflation as a consuming force – acts upon a yielding Agonist (the economy). Verbs like *zgasić* ('put out') and *ugasić* ('extinguish') evoke scenarios, where institutional or political actors (the government, political parties, NBP, etc.) apply counterpressure to neutralize the opposing force. Similarly, *stłumić* ('smother') and *zdusić* ('choke off') reflect configurations depicting efforts to suppress or suffocate inflation's energy. In these cases, the actual resultant state is movement, since the Antagonist's force has not yet been fully neutralized (see, Fig. 4); however, the intended resultant state projected by these expressions is rest – a scenario in which counterpressure ultimately halts the Antagonist's activity.

This analysis therefore demonstrates how force-dynamic reasoning operates within a CMT framework: metaphors of INFLATION IS FIRE not only project embodied experience (heat, spread, containment) onto an abstract process but also encode a causal interaction schema of antagonistic interaction, capturing the tension between human control and natural force at the heart of economic discourse.

5. Concluding remarks

The contrastive analysis of metaphorical conceptualizations of inflation in Polish and English financial discourse has revealed both shared conceptual foundations and language-specific patterns shaped by cultural, economic, and pragmatic contexts. Drawing on Talmy's (1988, 2000) theory of force dynamics and Kövecses's (2020) extended CMT, we have shown that inflation is consistently conceptualized as a dynamic, antagonistic force – one that exerts pressure, moves through space, and interacts with other conceptual agents.

At a general level of schematicity, both languages rely on the image schema of MOVEMENT and its domain-level mappings such as VERTICAL MOTION (INCREASE IS UP, DECREASE IS DOWN) and JOURNEY (INFLATION IS A TRAVELLER). These schemas provide a foundation for conceptualizing inflation as rising, falling, accelerating, or reaching a goal. However, it is at the frame and mental space levels – where force-dynamic scenarios become clearly observable – that the most pronounced differences between the two languages emerge. In the Polish data, inflation is frequently portrayed as an aggressive and autonomous Antagonist that must be forcefully restrained, suppressed, or defeated by an Agonist, such as the central bank, interest rate policies, or governmental intervention. The prevalence of verbs such as *zżerać*, *zabijać*, *dobijać*, *zdusić*, *zgasić*, and *stłumić* reinforces this narrative, which is marked by a sense of urgency, threat, and high emotional salience. The Antagonist is

often depicted as both brutal and unstoppable, with the Agonist struggling to regain control – a force-dynamic configuration that dramatizes the struggle and foregrounds societal vulnerability. By contrast, in the English corpus, inflation is still construed as a resisting or harmful force, but the tone is generally more measured, institutional, and strategic. Metaphorical expressions, such as *tackle inflation*, *beat inflation*, or *the Fed's capacity to fight inflation*, frame the Agonist (typically an institution or policy actor) as capable, competent, and in many cases dominant. The force-dynamic scenarios here tend to emphasize management and response rather than existential threat or possible destruction.

These findings suggest that the metaphorical portrayal of inflation is shaped not only by cognitive universals but also by contextual and socio-economic conditions. In the Polish context, where the impact of inflation has been particularly severe in recent years, the metaphors tend to reflect a more adversarial and emotionally charged force dynamics, with a vulnerable or overwhelmed Agonist. In the context of the USA, metaphorical framings are more technocratic and less emotionally saturated, reflecting confidence in the Agonist's agency and institutional mechanisms of control. Ultimately, the interaction of force dynamics and metaphorical schematicity offers a powerful tool for understanding how abstract economic phenomena like inflation are framed and experienced across cultures.

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