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## THE ROLE OF INANIMATE SUBJECTS IN CONSTRUCTING OBJECTIVITY AND AUTHORITY IN ACADEMIC WRITING

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### ABSTRACT

Scientific writing exhibits distinctive linguistic characteristics. One such feature is the prevalent use of inanimate subjects paired with active verbs, a common strategy in academic writing to convey impersonality and objectivity (Hyland, 1996; Johns, 2001; Master, 1991, 2001; Mauranen, 2001; Šeškauskienė, 2009). This study focuses on examining the lexico-grammatical patterns in research article abstracts, particularly the usage of active verbs combined with inanimate subjects as in "The present study attempts to...". The dataset for this analysis comprises 720 abstracts randomly selected from fields including biology, engineering, chemistry, physics, economics, linguistics, psychology and sociology. Recognizing the cultural and disciplinary variations in scientific language, the research evaluates Turkish-written abstracts (n=240), their English translations (n=240), and abstracts written originally in English (n=240). This research seeks to examine how frequently academic writers in Turkish and English employ inanimate subjects paired with active verbs to convey their stance within abstract sections. The findings reveal both similarities and differences across languages and disciplines. The study indicates that abstracts in Turkish and English commonly use inanimate subjects to maintain an objective tone. However, abstracts originally written in English demonstrate a stronger focus on authority and competition within the scientific discourse community, marked by more frequent use of the active voice. Additionally, a comparison across disciplines reveals that social science abstracts frequently make use of inanimate subjects, while those in the natural sciences tend to favor the passive voice. These findings suggest that the choice of lexico-grammatical structures for expressing stance is shaped by both cultural norms and disciplinary conventions in academic writing.

**Keywords:** Scientific discourse, inanimate subjects, active verbs, research article abstracts, writer's stance

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## INTRODUCTION

The grammatical system of every language possesses the ability to generate meaning, enabling users to construct interpretations through various grammatical structures. In the context of scientific discourse, these structures are utilized to define, classify, explain, and justify scientific knowledge. Scientific language incorporates specific grammatical patterns that shape scientific understanding and reinterpret human experiences (Halliday & Matthiessen, 1999). This language reflects the cultural norms of its discourse community, with social and cultural influences shaping how scientists perceive their world and formulate logical arguments. Every discourse community adopts its own institutional language, distinguished by specific ways of defining and classifying issues (Reeves, 2005, p. 99).

Based on this perspective, extensive research has been conducted on research articles (RAs), examining their rhetorical and lexico-grammatical features. A significant component of most RAs is the informative abstract, which summarizes the study's purpose, methodology, findings, and conclusions. The abstract serves as a tool to promote the research and persuade readers to engage with the full article. Abstracts follow specific rhetorical moves (Hyland & Tse, 2005) and are regarded as "a valuable source for investigating the cultural causes and consequences of linguistic and rhetorical differences across languages" (van Bonn & Swales, 2007, p. 95). In recent years, the abstract has gained considerable scholarly interest, with studies focusing on its rhetorical pattern (e.g., Bhatia, 1993; Cross & Oppenheim, 2006; Graetz, 1985; Lorés, 2004; Huckin, 2001; Santos, 1996; Swales, 1990) and comparative analyses examining disciplinary and cultural variations (e.g., Martín-Martín, 2002; Melander et al., 1997; Van Bonn & Swales, 2007; Ventola, 1994; Yakhontova, 2002, 2006).

Research focusing on metadiscourse in Turkish abstracts remains limited. While studies by Ekoç (2008), Akbaş (2012), and Önder Özdemir & Longo (2014) have focused on metadiscourse markers, other research, such as those by Kafes (2012), Çandarlı (2012) and Çakır & Fidan (2015) has examined the rhetorical structure of abstracts. They have highlighted significant variations in how abstracts are constructed.

There is also research addressing stance expressions employed in abstracts. For instance, Uysal and Akpınar (2008) examined indirectness markers in conference abstracts written by Turkish and Indian academics. Çakır (2011) analyzed grammatical metaphor and the use of active versus passive voice in Turkish and English abstracts, while Kafes (2009) studied modal verbs. Additionally, Fidan & Çakır (2015) investigated verb usage, and Çakır (2016) explored stance adverbs. These studies demonstrated clear differences in how native English and non-native Turkish academic writers utilize stance expressions.

Given the relatively limited research on abstracts in Turkey compared to the extensive studies on research articles, this study aims to address this gap. It provides a comparative analysis of English and Turkish journal abstracts, focusing on the use of active verbs with inanimate subjects. The research investigates how Turkish and English academic writers in the social and natural sciences use these constructions to convey scientific meaning and establish an objective stance in their abstracts. The study operates under the assumption that,

despite shared conventions within the global scientific discourse community, cultural differences may lead to variations in lexico-grammatical choices. Specifically, the study seeks to address the following research questions:

- What similarities or differences exist in the use of the IS+AV pattern between abstracts authored by Turkish and English academic writers?
- How does the use of the IS+AV pattern compare between the soft and hard sciences?

### **Methodological Framework**

#### **Stance in Academic Discourse**

Authorial stance reflects how writers present their perspectives on the elements of their work. Researchers have studied this concept under various terms and definitions. Hyland (2001, p. 176) describes stance as a "textual voice" that communicates the writer's attitudinal approach. Similarly, Biber (1988, p. 204) defines it as "the ways in which an author or speaker overtly expresses attitudes, feelings, judgments, or commitment concerning the message." Essentially, stance is conveyed through linguistic markers that reveal the writer's level of certainty and their perspective on a given proposition (Biber, 2006). According to Conrad and Biber (2000), stance reflects the author's attitude toward a topic, event, or individual, often referred to as attitudinal stance.

Research has extensively analyzed various grammatical structures to identify how stance is constructed in scientific writing (e.g., Conrad & Biber, 2000; Getkham, 2016; Hunston & Thompson, 2000; Hyland, 2005; Silver, 2003;) and in abstracts (e.g., Hyland & Tse, 2005; Stotesbury, 2003). The way writers build their authorial stance is closely tied to their selection of stance markers. Yakhontova (2002) emphasizes that national academic discourse communities often concentrate on presenting their research rather than persuading others of its importance. This preference reduces the need to justify their work's significance, which might account for the infrequent use of the verb "aim" in abstracts written by native English speakers, aligning with the norms of English academic writing. Similarly, Becher (1989) notes significant disciplinary differences in scientific writing: hard sciences favor an objective and impersonal tone, whereas soft sciences lean towards a subjective perspective, resulting in a more personalized writing style.

#### **Inanimate Subjects With Active Verbs (IS+AV pattern) as Stance Expression**

In recent years, extensive research has focused on the nature of scientific language. Efforts have been made to outline its distinctive lexico-grammatical characteristics. Scientific discourse is notably defined by its use of specialized terminology and linguistic structures, including the passive voice, grammatical metaphors, and the "inanimate subject + active verb" (IS+AV) pattern. The IS+AV pattern has been labeled as metonymy or metaphor (Low, 1999; Stålhammar, 2006). English academic language prefers this pattern in drawing conclusions (Johns, 2001, p.56), e.g.: *the evidence suggests, the results show* or expressing the aim of research

e.g.: *the paper aims to, the study tries to*. Therefore, the three most frequently used verbs are *show/demonstrate, suggest* and *indicate*. Research suggests that this pattern is employed to build objectivity and anonymity in the text through removal of human agency.

Johns (2001) examined the IS+AV pattern in popular scientific prose. Master (2001) studied the pattern in scientific research articles in hard sciences and determined that this pattern was mainly used in presentation, change-of-state-or-location, explanation and cause-and-effect. Šeškauskienė (2009) analyzed the pattern in English linguistic research articles and found that this construction was mainly used in explanation environments. Akbaş and Hardman (2017) analyzed linguistic patterns, including the use of inanimate subjects, in the discussion sections of 90 dissertations from the Social Sciences. The dissertations were authored by native English and Turkish speakers as well as Turkish speakers of English. Findings showed that Turkish native writers and Turkish authors writing in English tended to adopt a more impersonal stance, relying heavily on implicit references to the author. In contrast, native English speakers used more explicit linguistic devices to construct their texts.

Within the framework outlined above, this study tries to add to the current literature on stance in scientific discourse by examining *inanimate subjects with active verbs (IS+AV)* of research article abstracts written in two languages, Turkish and English and from eight disciplines.

## **METHOD**

### **Research Design**

This study utilized a mixed-methods research design, combining both qualitative and quantitative approaches (Creswell, 2012). Specifically, both qualitative and quantitative document analyses were performed, employing techniques from text linguistics. Each IS+AV pattern in the abstracts was identified, and its interaction with active verbs was analyzed within the contextual framework. Quantitatively, the frequency and functional distribution of the IS+AV pattern were calculated, and comparisons were made across three groups of research article abstracts.

### **Data Collection**

For this study, abstracts were randomly selected from research articles published in peer-reviewed national and international journals affiliated with professional disciplinary associations across eight fields between 2005 and 2009. These fields include four from the social sciences (Psychology, Sociology, Economics, and Linguistics) and four from the natural sciences (Physics, Biology, Engineering and Chemistry). Only empirical research articles were included in the dataset. To ensure the reliability of findings in this comparative analysis, an equal number of abstracts—30 from each discipline—were chosen. The final dataset comprised 720 abstracts: 240 originally written in Turkish (TR-ORI), 240 corresponding parallel texts translated into English (E-PR), and 240 abstracts originally written in English (E-ORI).

Several remarks have to be made regarding the data. In this study, the translations of the Turkish abstracts are referred as parallel texts because the Turkish source text and English target text may render meaning using various different clauses. Due to this the number and size of clauses in the abstracts varies. Besides, parallel texts convey meaning using different grammatical patterns and wording. Hence, the translations do not always employ verbatim transfer of the source texts. On the contrary, the writer of the discourse community may make changes while constructing a parallel text in English, although they have equivalent patterns in the target language that they could refer to. Clearly, the abstract pairs in the national journals can be a translation or a “reconceptualization” (Van Bonn & Swales 2007, p. 96) of the other.

We assume that the abstracts are translated from Turkish into English. However, we are aware of the fact that some academic writers might have written their abstracts first in English and then transferred it into Turkish. But since we are dealing with parallel texts, our main concern is how the academic writer constructs scientific meaning in Turkish and English within the discourse community, so the direction of transfer is not the main focus of this study. Abstracts written by native English speakers were chosen, with the assumption that the authors are native speakers of English and based at Anglo-American universities. Similarly, abstracts by Turkish authors were selected from scholars affiliated with Turkish universities. After the abstracts were collected, a word count was performed, as the number of clauses and overall length can differ between the source and target texts. The total number of words for the corpus is provided in Table 1.

**Table 1.** Number of words in the corpus

<b>Text</b>	<b>Number of words</b>
T-ORI	26798
E-PR	32785
E-ORI	37508
Total	97091

### **Data Analysis**

Initially, the source, target, and original texts were examined to determine the frequency of active verbs used with inanimate subjects. Thus, in each abstract, the occurrences of *IS+AV pattern* were identified. The data from the analysis were analyzed using the Wilcoxon and Man Whitney-U tests. Using these statistical tests, text pairs (T-ORI, E-ORI, E-PR) as well as the soft and hard sciences were compared. Wilcoxon and Man Whitney-U tests were applied to the raw frequency count to compare differences on *active verbs with inanimate subjects* and to determine what the level of significance was. As the length of abstracts varies both within each discipline and across languages, converting the raw data into standardized figures and calculating the frequency of active verbs with inanimate subjects per 100 words allows for a more meaningful comparison.

**FINDINGS**

**Distribution of the IS+AV Pattern Across Languages**

The use of active verbs with inanimate subjects in abstracts was examined across eight disciplines. Following the corpus analysis outlined earlier, the frequency of active verbs with inanimate subjects was calculated and categorized. Table 2 and Figure 1 display the frequency of these verbs per 100 words, highlighting the cross-linguistic variation within each category.

**Table 2.** Overall distribution of active verbs with inanimate subjects across languages

	T-ORI (Turkish abstracts)			E-PR (English translation)			E-ORI (English abstracts) original			TR/ING KON	TR/ING PR	ING KON/ ING PR
	Mean	±	Median	Mean	±	Median	Mean	±	Median	<i>p</i> <sup>†</sup>	<i>p</i> <sup>†</sup>	<i>p</i> <sup>†</sup>
	SS		(Min-Max)	SS		(Min-Max)	SS		(Min-Max)			
IS+AV	10,9	±	0 (0 - 100)	15,9	±	12,5 (0 - 100)	12,6	±	9,5 (0 - 85,7)	0,009**	0,000***	0,206

Wilcoxon Test *p*<0.01

Table 2 illustrates that the frequency per 100 words of *active verbs with inanimate subjects* showed a varying distribution across texts. The frequency of IS+AV in Turkish original abstracts was 10.9 ± 17.6, with a median of 0 (ranging from 0 to 100). This indicates a low overall usage of active verbs with inanimate subjects in Turkish, with some abstracts showing a very high frequency. In the English translated abstracts, the mean frequency increased to 15.9 ± 19.3, with a median of 12.5 (ranging from 0 to 100). This suggests that in translated texts, IS+AV is used more frequently than in Turkish abstracts. The frequency in original English abstracts was similar to translated ones, with a mean of 12.6 ± 15.3 and a median of 9.5 (ranging from 0 to 85.7). Although this shows a preference for the IS+AV pattern, it is less frequent compared to translated English texts, indicating that translation might influence the frequency of this pattern. The difference between Turkish and English original texts (T-ORI vs. E-ORI) was highly significant (*p* < 0.001), suggesting that English abstracts tend to employ the IS+AV pattern more frequently than Turkish abstracts. In contrast, the comparison between English original and translated abstracts (E-ORI vs. E-PR) did not show a statistically significant difference (*p* = 0.206). This suggests that the pattern’s usage is relatively stable between the two forms of English.

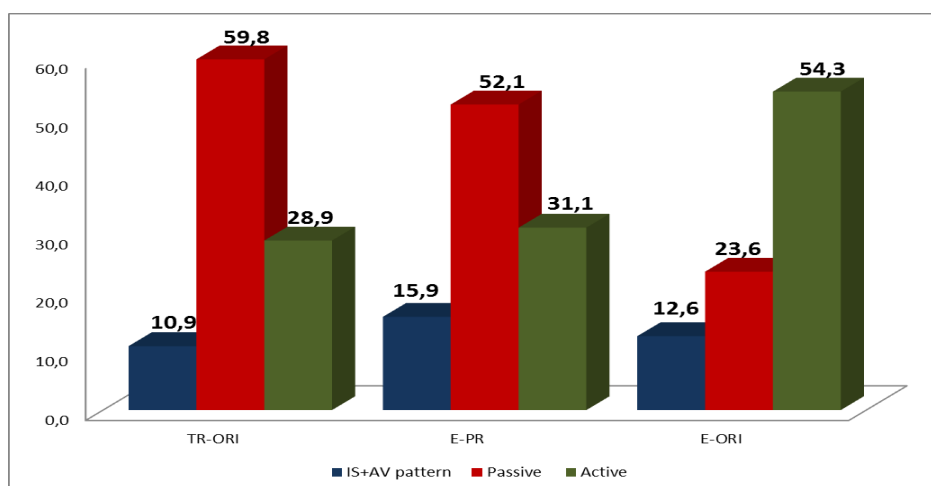


Figure 1. Distribution of the IS+AV pattern, passive and active voice across languages

While Turkish abstracts exhibit a lower frequency of IS+AV, they tend to use passive voice more often. Figure 1 highlights the distribution of passive and active voice across languages. In Turkish, the passive voice appears to be favored in the same contexts where English abstracts employ the IS+AV pattern. Therefore, the difference between Turkish and English is not merely about the use of IS+AV but also about the choice between active and passive constructions, with Turkish leaning more towards passive structures.

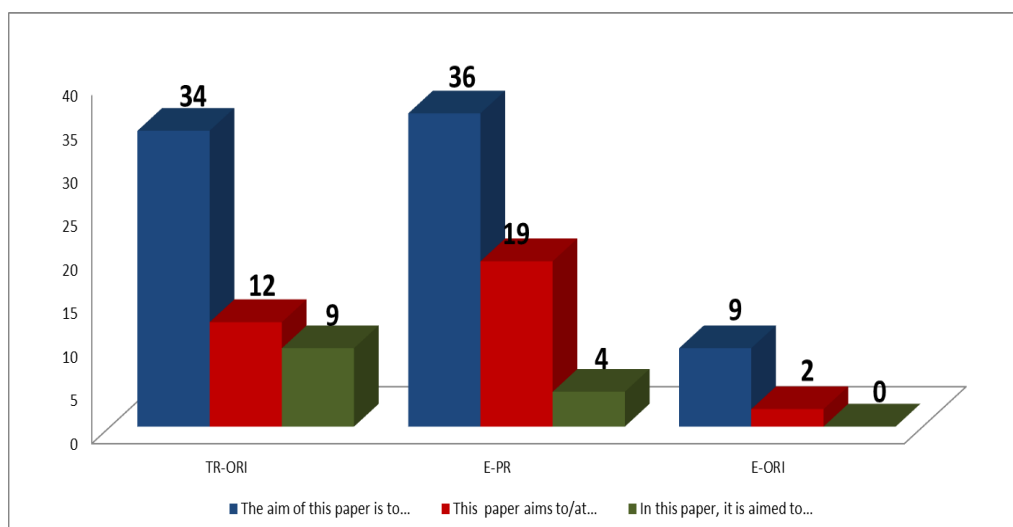


Figure 2. Distribution of the IS+AV pattern focusing on aim across languages

The study also focused on specific verbs used in the IS+AV pattern, such as "show", "demonstrate", "suggest", and "indicate", which are commonly found in scientific and academic writing. These verbs convey actions or processes performed by inanimate subjects (e.g., "The results show..."). Figure 2 demonstrates the use of the verb "aim" in the IS+AV pattern. Interestingly, this verb appeared more frequently in Turkish and translated English abstracts compared to original English texts, indicating a preference or stylistic difference.

The overall findings regarding the distribution of the IS+AV pattern indicate that English abstracts tend to employ this structure more frequently than Turkish abstracts, with the highest frequency observed in the English translated abstracts. The influence of passive voice in Turkish abstracts complicates the comparison, suggesting that the observed differences may not be attributed solely to the use of the IS+AV pattern, but also to the distinct linguistic structures favored in each language. Moreover, the use of specific verbs, such as "aim," underscores further differences in the ways academic writing is structured across languages.

**Distribution of the IS+AV Pattern Across Soft Sciences and Hard Sciences**

The findings presented in Table 3 offer a detailed analysis of the distribution of active verbs with inanimate subjects (IS+AV) across different academic fields, specifically comparing the social sciences and the natural sciences. The data reveals significant differences in the frequency of IS+AV usage between these two broad disciplinary categories, with social sciences showing a notably higher frequency of such structures

**Table 3.** Distribution of active verbs with inanimate subjects in social sciences and natural sciences

<i>IS+AV</i>	social sciences		natural sciences		p <sup>†</sup>
	Mean ± SS	Median (Min-Max)	Mean ± SS	Median (Min-Max)	
<b>T-ORI (Turkish abstracts)</b>	18,3 ± 21,2	12,5 (0 - 100)	3,5 ± 7,7	0 (0 – 33,3)	0,000***
<b>E-PR (English translation)</b>	26,4 ± 20,0	25 (0 - 100)	5,5 ± 11,4	0 (0 – 50)	0,000***
<b>E-ORI (English original abstracts)</b>	17,4 ± 17,3	12,9 (0 – 85,7)	7,8 ± 11,3	0 (0 – 50)	0,001*

Wilcoxon Test p<0.01

In social sciences, Turkish abstracts exhibited a mean frequency of 18.3 ± 21.2 active verbs with inanimate subjects, with a median of 12.5 (range: 0 to 100). This indicates a moderate but significant use of the IS+AV pattern within this discipline. In contrast, natural sciences in Turkish abstracts showed a much lower mean frequency of 3.5 ± 7.7, with a median of 0 (range: 0 to 33.3). This difference suggests that Turkish authors in the natural sciences tend to use this structure far less frequently.

In the social sciences, English translations showed the highest frequency of IS+AV across all categories, with a mean of 26.4 ± 20.0 and a median of 25 (range: 0 to 100). This indicates that translated texts in the social sciences employ IS+AV more frequently than both their original English counterparts and their Turkish translations. For the natural sciences, the frequency was much lower, with a mean of 5.5 ± 11.4 and a median of 0 (range: 0 to 50). This aligns with the patterns observed in Turkish abstracts, where natural sciences



generally showed a preference for other syntactic structures, such as passive voice, rather than active verbs with inanimate subjects.

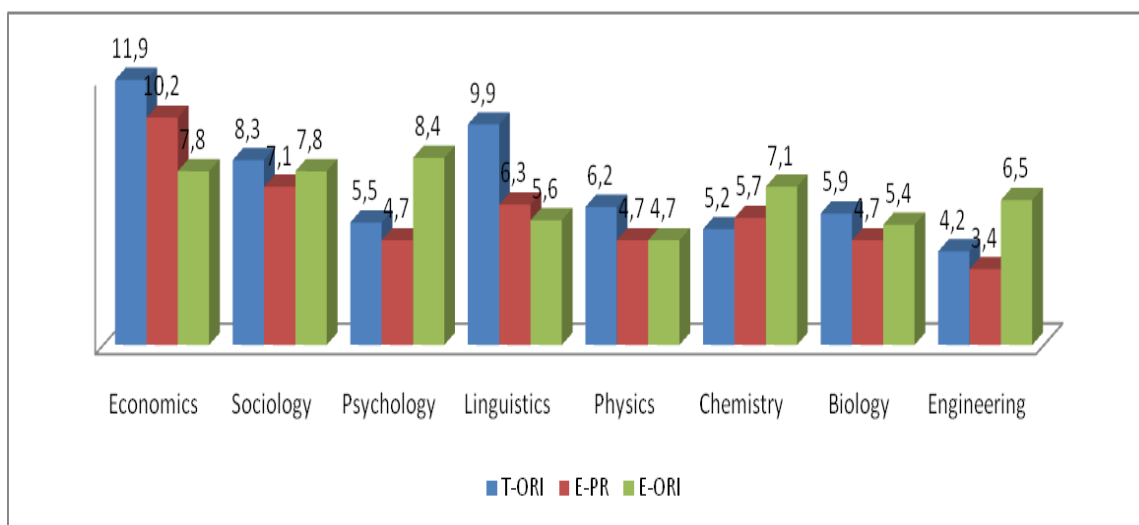
The social sciences in English original abstracts showed a mean of  $17.4 \pm 17.3$ , with a median of 12.9 (range: 0 to 85.7), indicating a moderate use of the IS+AV structure. While the frequency was lower than in the English-translated abstracts, it still outpaced the natural sciences. The natural sciences in English original abstracts demonstrated a mean frequency of  $7.8 \pm 11.3$  with a median of 0 (range: 0 to 50). Although slightly higher than in Turkish natural science abstracts, the frequency remains relatively low when compared to the social sciences.

The Wilcoxon test revealed statistically significant differences between the social and natural sciences in all language groups. In both Turkish ( $p = 0.000$ ) and English (both translated:  $p = 0.000$ , and original:  $p = 0.001$ ), the difference in IS+AV frequency between the social and natural sciences was highly significant. The highest p-values were found in the Turkish data ( $p = 0.000$ ), which shows a strong correlation between academic discipline and the use of the IS+AV pattern. This is particularly notable in the social sciences, where the pattern is used more frequently across both languages and types of texts.

The results indicate a clear preference for the IS+AV pattern in the social sciences compared to the natural sciences. This may reflect the nature of writing in these fields. Social sciences often engage in discursive and analytical writing, which may lend itself to the use of active verbs with inanimate subjects, particularly when discussing theories, models, or concepts (e.g., "The theory suggests..." or "The data demonstrate..."). In contrast, natural sciences tend to favor passive voice to emphasize the research process or results rather than the agent performing the action. This is consistent with the generally more impersonal, object-focused writing style in the natural sciences, where the subject (the agent) is often less emphasized.

Interestingly, English-translated abstracts from the social sciences showed the highest proportion of IS+AV usage across all texts in the corpus. This finding could be attributed to the translation process, which may influence the syntactic structures in the target language.

The findings suggest that the social sciences tend to employ the IS+AV pattern significantly more frequently than the natural sciences across both Turkish and English abstracts. This difference is particularly evident in the English-translated texts from the social sciences, which exhibit the highest frequency of IS+AV usage. These findings highlight the disciplinary and linguistic nuances that influence academic writing, suggesting that the choice of active verb constructions with inanimate subjects may be linked to both the nature of the discipline and the translation process itself.



**Figure 3.** Overall distribution of active verbs with inanimate subjects in each domain

The analysis of disciplinary variations in the distribution of active verbs with inanimate subjects (IS+AV) revealed notable differences across eight academic disciplines, as summarized in Figure 3. The data shows the mean frequency of IS+AV usage in Turkish original abstracts (T-ORI), English translated abstracts (E-PR), and English original abstracts (E-ORI) for each discipline. These findings underscore the impact of both disciplinary focus and language on the use of IS+AV patterns.

The mean frequency of IS+AV in Turkish economics abstracts was 11.9. This suggests that Turkish authors in economics utilize IS+AV at a moderate rate, with a preference for active constructions involving inanimate subjects. The frequency in the English translations decreased slightly to 10.2, reflecting a slight reduction in the use of this pattern post-translation. In English original abstracts, the frequency further decreased to 7.8, indicating that in the English context, economics authors may prefer less frequent usage of the IS+AV pattern compared to their Turkish counterparts.

The frequency in Turkish sociology abstracts was 8.3, which is moderate but lower than in economics. Translated English abstracts in sociology had a frequency of 7.1, showing a slight decrease in the use of IS+AV compared to Turkish sociology texts. In English original abstracts, the frequency remained at 7.8, suggesting a stable usage of IS+AV in the sociology discipline in both Turkish and English.

Turkish psychology abstracts exhibited a lower frequency of 5.5, indicating a preference for other grammatical structures, potentially more passive forms. The English translation showed a similar trend with a frequency of 4.7. In English original psychology abstracts, the frequency increased to 8.4, suggesting a shift in writing style in English that favors the IS+AV pattern more than in Turkish psychology texts.

Linguistics abstracts in Turkish displayed a moderate usage of 9.9 IS+AV constructions. The frequency in English translations decreased to 6.3, reflecting a reduction in the use of this pattern when moving from Turkish to

English. The English original abstracts in linguistics showed the lowest frequency of 5.6, indicating that in linguistics, there may be a stronger preference for other syntactic structures.

In Turkish physics abstracts, the frequency of IS+AV was 6.2, suggesting a moderate use of this structure. In the English translations, the frequency remained similar at 4.7, indicating that IS+AV usage does not significantly change between Turkish and translated English physics texts. In English original abstracts, the frequency of IS+AV further decreased to 4.7, suggesting that the pattern is less frequently used in the natural sciences, such as physics.

Chemistry abstracts in Turkish had a mean frequency of 5.2, with IS+AV used at a lower rate than in economics or sociology. In English translated abstracts, the frequency increased slightly to 5.7, but remained relatively low. In English original chemistry abstracts, the frequency rose to 7.1, suggesting a slightly higher use of IS+AV in the English context, though still relatively moderate compared to other fields.

Turkish biology abstracts showed a mean frequency of 5.9, indicating a moderate but relatively low use of IS+AV in comparison to the social sciences. English translated abstracts in biology had a slightly lower frequency of 4.7. In English original abstracts, the frequency was 5.4, maintaining a steady but lower frequency of IS+AV in biology.

Turkish engineering abstracts exhibited the lowest frequency of IS+AV at 4.2, suggesting a preference for other syntactic forms, possibly passive voice. The frequency in English translations was 3.4, continuing the trend of relatively low IS+AV usage in engineering. In English original abstracts, the frequency increased to 6.5, which represents a higher use of active verbs with inanimate subjects compared to the Turkish engineering abstracts, but it is still among the lowest across disciplines.

The data reveals that social sciences tend to have higher frequencies of IS+AV usage compared to the natural sciences across both languages. Among the social sciences, economics and sociology exhibited the highest use of IS+AV, especially in Turkish, with a noticeable decline in English, particularly in the original English abstracts.

In the natural sciences, disciplines like chemistry, biochemistry, and engineering consistently showed lower frequencies of IS+AV usage, with the highest frequencies observed in chemical engineering and biology, where slight increases were noted in the English versions of abstracts. This suggests that while the natural sciences still make use of IS+AV, they do so far less frequently than the social sciences.

## **CONCLUSION and DISCUSSION**

The cross-linguistics analysis of abstracts has revealed that English translated abstracts and English (E-ORI) abstracts equally make use of active verbs with inanimate subjects to construct stance. In both text pairs a similar grammatical patterning of active verbs with inanimate subject occurrences has been identified. This finding coincides with the features of scientific discourse. In academic writing, lexico-grammatical features such

as active/passive voice, grammatical metaphor, modality and inanimate subjects play a crucial role in establishing author's stance. The analysis indicated that field specialists construct their scientific discourse by making use of active verbs with inanimate subjects, a typical feature of the scientific language. The qualitative analysis of the same text pairs suggests that although both writing cultures follow the requirements of scientific discourse in employing *active verbs with inanimate subjects*, there is variation in the distribution of voice. Turkish writers showed a preference for agentless passive constructions. These findings suggest that the *IS+AV pattern* and *the passive* construction are favored in Turkish abstracts revealing an objective stance where the presence of the author is implicit. Although, the translated abstracts show a similar distribution of the *IS+AV pattern* and *the passive* construction, there is a slight increase in the *IS+AV pattern* and a decrease in the *passive* construction, indicating a tendency towards disciplinary writing practices of English academic discourse. It can be seen that English abstracts reveal an explicit stance by employing most frequently the active voice.

The cross-disciplinary analysis suggests that natural and social sciences construe scientific knowledge using different lexico-grammatical constructions. The academic writer in natural sciences may validate their argument by referring to quantitative evidence, while academic writers in social sciences have to draw on various linguistic constructions for reasoning. Thus, the distribution of *active verbs with inanimate subjects* was higher in social sciences. Research on academic discourse has highlighted that writers in the soft and hard sciences engage with their audiences in distinct ways (Hyland, 1998, 2001). Becher (1989) argues that scientific text production in the hard and soft sciences follows different processes. In hard sciences, authors emphasize objectivity, while in soft sciences; they display a more subjective approach. This results in an impersonal tone in the hard sciences and a more personalized stance in the soft sciences. The varying patterns of active verbs with inanimate subjects across disciplines may reflect differences in how scientific knowledge is constructed. These findings suggest that different disciplines may have distinct norms regarding the use of rhetorical features, such as active verbs with inanimate subjects.

The findings of this study indicate that the verb "aim" is frequently used in Turkish and translated abstracts but appears less often in English original abstracts. This suggests that the *IS+AV pattern* with the verb "aim" in Turkish abstracts serves to emphasize the focus of the study—what the research is about—rather than its significance. As Yakhontova (2002) observes, national academic discourse communities tend to describe the study's content rather than argue for its importance. In contrast, English abstracts often place less emphasis on this descriptive approach and instead focus on explaining the significance of the research, reflecting the expectations of the English-speaking academic community.

Additionally, the study reveals that while the Turkish scientific community generally prefers the passive voice, English scientific discourse favors using active verbs with *inanimate subjects and the active voice*. This difference further underscores the cultural distinctions between the English and Turkish academic communities. As Yakhontova (2006) suggests, in the global English-speaking scientific community, academic writers aim to "sell" their research by highlighting its importance and constructing a persuasive argument. This

is in line with Van Bonn and Swales (2007), who note that English academic writing often seeks to explicitly assert the writer's stance, making it clear why the study matters. On the other hand, in Turkish academic writing, the focus remains on presenting the facts and informing the reader about the study's content, with the author's presence remaining implicit. This contrast highlights the distinct rhetorical conventions and cultural expectations that shape the writing styles in these two academic traditions.

In this context, Turkish scientific discourse, as part of a local academic community, leans more towards "telling" about the study, where the writer conveys the data and provides information to the reader. Therefore, it can be concluded that scientific communities use distinct linguistic strategies to express their stance.

It is clear that additional comparative studies are necessary to draw definitive conclusions from these findings. One limitation of this research is that the English abstracts from native speakers were randomly selected from academic journal websites based on the authors' affiliations and names, which does not guarantee that they were written by authentic native English speakers. Another limitation is that this study focused on abstracts from only eight disciplines.

#### **SUGGESTIONS**

Academic writing programs should foster cross-cultural awareness, particularly in relation to differences in writing styles, such as the use of *active verbs with inanimate subjects* and voice preferences between Turkish and English. It is essential to create discipline-specific writing guides that highlight common grammatical structures, rhetorical strategies, and voice conventions, helping writers navigate the distinct norms of their fields. Additionally, future research should investigate how various disciplines, like social and natural sciences, employ language to construct knowledge, and explore more academic genres to expand our understanding of linguistic features. Incorporating non-Western languages and academic traditions into research will provide a global perspective on scientific writing conventions, enhancing the international impact of academic work. Finally, a broader analysis of lexico-grammatical features beyond just *inanimate subjects with active verbs* is necessary to gain a deeper understanding of how academic stance is conveyed in discourse.

#### **REFERENCES**

- Akbaş E. & Hardman J. (2017). An Exploratory Study on Authorial (in)visibility across Postgraduate Academic Writing: Dilemma of developing a personal and/or impersonal authorial self. In Hatipoglu C., Akbas E., Bayyurt Y. (Eds), *Metadiscourse in Written Genres: Uncovering Textual and Interactional Aspects of Texts*, (pp.139-174). Peter Lang.
- Akbaş, E. (2012). Exploring Metadiscourse in Master's Dissertation Abstracts: Cultural and Linguistic Variations across Postgraduate Writers. *International Journal of Applied Linguistics and English Literature*, 1, 12-26.
- Becher, T. (1989). *Academic Tribes and Territories: Intellectual Inquiry and the Cultures of Disciplines*. SRHE/Open University Press.
- Bhatia, V. K. (1993). *Analysing genre: Language use in professional settings*. Longman.

- Biber, D. (1988). *Variation across Speech and Writing*. Cambridge University Press.
- Biber, D. (2006). *University Language: A Corpus-Based Study of Spoken and Written Registers*. Benjamins. <http://dx.doi.org/10.1075/scl.23>
- Conrad, S. & Biber, D. (2000). Adverbial Marking of Stance in Speech and Writing. In S. Hunston, & G. Thompson (Eds.), *Evaluation in Text: Authorial Stance and the Construction of Discourse* (pp. 56-73). Oxford University Press.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th Ed.). Pearson Education.
- Cross, C. & Oppenheim, C. (2006). A genre analysis of scientific abstracts. *Journal of Documentation*, 62(4), 428–446.
- Çakır, H. & Fidan, Ö. (2015). A Contrastive Study of the Rhetorical Structure of Turkish and English Research Article Abstracts. In D. Zeyrek, Ç. Sagın Simsek, U. Atas, & J. Rehbein (Eds.), *Ankara Papers in Turkish and Turkic Linguistics* (pp. 367-378). Harrassowitz Verlag.
- Çakır, H. & Kansu Yetkiner, N. (2012). Information Packaging in Scientific Discourse Across Disciplines and Languages: Explicitation Hypothesis in Translation Studies Revisited. *Paper presented at the International Language, Literature and Stylistics Symposium*, Trakya University.
- Çakır, H. (2011). *Türkçe ve İngilizce Bilimsel Makale Özetlerinde Bilgiyi Kurgulama ve Yazar Kimliğini Kodlama Biçimleri* [Unpublished doctoral dissertation]. Dokuz Eylül University.
- Çakır, H. (2016). Native and Non-Native Writers' Use of Stance Adverbs in English Research Article Abstracts. *Open Journal of Modern Linguistics*, 6, 85-96. <http://dx.doi.org/10.4236/ojml.2016.62008>
- Çandarlı, D. (2012). A Cross-Cultural Investigation of English and Turkish Research Article Abstracts in Educational Sciences. *Studies about Languages*, 20, 2-17. <http://dx.doi.org/10.5755/j01.sal.0.20.1770>
- Ekoç, A. (2008). *Analyzing Turkish MA Students' Use of Lexical Hedging Strategies in Theses Abstracts*. [Unpublished MA Thesis]. Istanbul University.
- Fidan, Ö. & Çakır, H. (2012). The Use of Verbs in Turkish and English Research Article Abstracts. *Paper presented at the International Language, Literature and Stylistics Symposium*. Trakya University.
- Getkham, K. (2016). Authorial Stance in Thai Students' Doctoral Dissertation. *English Language Education*, 9, 80-95. <http://dx.doi.org/10.5539/elt.v9n3p80>
- Graetz, N. (1985). Teaching EFL students to extract structural information from abstracts. In J. M. Ullign, and A.K. Pugh (eds.), *Reading for professional purposes: Methods and materials in teaching languages* (pp. 123–135). Acco.
- Halliday, M.A.K. & Matthiessen, C.M.I.M. (1999). *Construing Experience through Meaning: A Language-based Approach to Cognition*. Cassell.
- Huckin, T. (2001). Abstracting from abstracts. In M. Hewings (Ed.), *Academic writing in context: Implications and applications* (pp. 93–103). The University of Birmingham Press.
- Hunston, S. & Thompson, G. (Eds.) (2000). *Evaluation in Text: Authorial Stance and the Construction of Discourse*. Oxford University Press.

- Hyland, K. (1996). Writing without Conviction: Hedging in Science Research Articles. *Applied Linguistics*, 17, 433-454. <http://dx.doi.org/10.1093/applin/17.4.433>
- Hyland, K. (1999). Disciplinary Discourses: Writer Stance in Research Articles. In H. Candlin, & K. Hyland (Eds.), *Writing: Texts, Processes and Practices* (pp. 99-121). Longman.
- Hyland, K. (1998). *Hedging in scientific research articles*. John Benjamins.
- Hyland, K. (2001). Bringing in the reader: Addressee features in academic writing. *Written Communication*, 18(4), 549–574.
- Hyland, K. (2005). Stance and engagement: A model of interaction in academic discourse. *Discourse Studies*, 7(2), 173–191.
- Hyland, K., & Tse, P. 2005. Hooking the reader: A corpus study of evaluative that in abstracts. *English for Specific Purposes*, 24, 123–139.
- Johns, T. (2001). From evidence to conclusion: the case of 'indicate that'. M. Hewings (Ed.), *Academic Writing in Context. Implications and Applications* (pp. 55-62). The University of Birmingham University Press.
- Kafes, H. (2009). *Authorial stance in academic English: native and non-native academic speaker writers' use of stance devices (modal verbs) in research articles*. [Unpublished doctoral dissertation]. Anadolu University.
- Kafes, H. (2012). Cultural Traces on the Rhetorical Organization of Research Article Abstracts. *International Journal on New Trends in Education and Their Implications*, 3, 207-220.
- Lorés, R. (2004). On RA abstracts: from rhetorical structure to thematic organisation. *English for Specific Purposes*, 23, 280-302.
- Low, G. (1999). "The paper thinks...": Investigating the acceptability of the metaphor an essay is a person. In: L. Cameron and G. Low (Eds) *Researching and Applying Metaphor* (pp. 221–248). CUP
- Martín-Martín, P. (2002). A genre-based investigation of abstract writing in English and Spanish. *Revista Canaria de Estudios Ingleses*, 44, 47–64.
- Master, P. (1991). Active verbs with inanimate subjects in scientific prose. *English for Specific Purposes*, 10(1), 15-33.
- Master, P. (2001). Active verbs with inanimate subjects in scientific research articles. In: M. Hewings (Ed.) *Academic Writing in Context. Implications and Applications* (pp.169-181). University of Birmingham University Press.
- Mauranen, A. (2001). Descriptions or explanations? Some methodological issues in Contrastive Rhetoric. M. Hewings (Ed.) *Academic Writing in Context. Implications and Applications* (pp. 43-54). The University of Birmingham University Press.
- Melander, B., Swales, J. M. & Fredrickson, K. M. (1997). Journal abstracts from three academic fields in the United States and Sweden: National or disciplinary proclivities? In A. Duszak (Ed.), *Intellectual styles and cross-cultural communication* (pp. 251–272). Mouton De Gruyter.
- Önder Özdemir, N. & Longo, B. (2014). Metadiscourse Use in Thesis Abstracts: A Cross-Cultural Study. *Procedia-Social and Behavioral Sciences*, 141, 59-63. <http://dx.doi.org/10.1016/j.sbspro.2014.05.011>
- Reeves, C. (2005). *The Language of Science*. Routledge.

- Santos, M. B. D. (1996). The Textual Organization of Research Paper Abstracts in Applied Linguistics. *Text*, 16, 481-499. <http://dx.doi.org/10.1515/text.1.1996.16.4.481>
- Šeškauskienė, I. (2009). *The paper suggests*: inanimate subject + active verb in English linguistic discourse. *Kalbotyra*, 60(3), 84-93.
- Silver, M. (2003). The Stance of Stance: A Critical Look at Ways Stance is Expressed and Modeled in Academic Discourse. *Journal of English for Academic Purposes*, 2, 359-374. [http://dx.doi.org/10.1016/S1475-1585\(03\)00051-1](http://dx.doi.org/10.1016/S1475-1585(03)00051-1)
- Stålhammar, M. (2006). Grammatical Metaphor/Metonymy in the Treaty Establishing a Constitution for Europe: A Comparison between the English and Swedish Versions. *Nordic Journal for English Studies*, 5(1), 99-117.
- Stotesbury, H. (2003). Evaluation in Research Article Abstracts in the Narrative and Hard Sciences. *Journal of English for Academic Purposes*, 2, 327-341. [http://dx.doi.org/10.1016/S1475-1585\(03\)00049-3](http://dx.doi.org/10.1016/S1475-1585(03)00049-3)
- Swales, J. (1990). *Genre analysis*. Cambridge University Press.
- Uysal H. H. & Akpınar, K. D. (2008). Cross-cultural Differences in Turkish, Japanese, and Indian Scholars' Conference Abstracts. *Paper presented at the 8th International Language, Literature, and Stylistics Conference*. Izmir, Turkey.
- Van Bonn, S. & Swales, J. M. (2007). English and French journal abstracts in the language sciences: Three exploratory studies. *Journal of English for Academic Purposes*, 6, 93-108.
- Ventola, E. (1994). Abstracts as an object of linguistic study. In S. Cmejrkova, F. Danes and E. Havlova (Eds) *Writing vs. speaking. Language, text, discourse, communication* (pp. 333-352). Gunter Narr.
- Yakhontova, T. (2002). 'Selling' or 'telling'? The issue of cultural variation in research genres. In J. Flowerdew (Ed.), *Academic discourse* (pp. 216-232). Pearson Education.
- Yakhontova, T. (2006). Cultural and disciplinary variation in academic discourse: the issue of influencing factors. *Journal of English for Academic Purposes*, 5, 153-167.



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