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RICERCHE

The varieties of Inner Speech worth pursuing. Foundations for a phenomenal taxonomy

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Abstract *Inner Speech* (IS) falls within the purview of various fields of inquiry, including philosophy, psychology, linguistics, and, more recently, neuroscience. Due to the diverse aims, methodologies, and scopes across these disciplines, there exist inherent ambiguities that could impede the development of a unified research program or hinder the convergence of disparate disciplinary investigations into a cohesive whole. Therefore, in this article, my aim is to clarify the terminology, concepts, and expressions employed by scholars from different fields. I will achieve this by compiling and synthesizing appropriate theoretical and analytical proposals from contemporary IS scholars, while also subjecting a select few of these proposals to critical examination. Ultimately, I will present a fundamental taxonomy, which, nonetheless, relies on two essential postulates: (1) IS must be characterized based on its intrinsic nature of attentive conscious experience; (2) IS must be unequivocally considered as an intrinsically linguistic phenomenon.
PAROLE CHIAVE: Inner Speech; Introspection; Psychology; Linguistics

Riassunto *Le varietà di discorso interiore su cui vale la pena riflettere. Fondamenti per una tassonomia fenomenica* - Il *discorso interiore* è oggetto d'indagine in diversi ambiti disciplinari, tra cui la filosofia, la psicologia, la linguistica e, più recentemente, le neuroscienze. A causa delle diverse finalità, metodologie e specificità di queste discipline, emergono ambiguità intrinseche che possono ostacolare lo sviluppo di un programma di ricerca unitario o impedire il convergere di indagini disciplinari differenti in una prospettiva coerente. In questo lavoro voglio quindi chiarire terminologia, concetti fondamentali ed espressioni utilizzate dagli studiosi nei diversi campi di ricerca. Il mio obiettivo è raccogliere e sintetizzare le specifiche proposte teoriche e analitiche avanzate da coloro che, in tempi recenti, si sono occupati di questo tema, sottoponendo al contempo alcune di queste proposte a un esame critico. Presenterò infine una tassonomia di base che poggia su due postulati essenziali: (1) il discorso interiore deve essere caratterizzato in base alla sua natura intrinseca di esperienza cosciente e attenta; (2) il discorso interiore deve essere inequivocabilmente considerato come un fenomeno intrinsecamente linguistico.
KEYWORDS: Discorso interiore; Introspezione; Psicologia; Linguistica

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1 Introduction

Inner Speech (IS) falls within the purview of various fields of inquiry, including philosophy, psychology, linguistics,[1] and, more recently, neuroscience. Over the past few decades, there has been a growing interest in IS, leading to a substantial number of studies on the topic.[2] This increasing interest lays the groundwork for genuinely interdisciplinary research. However, due to the diversity of aims, methodologies, and scope across these disciplines, there are inherent ambiguities that can impede the development of a unified research program or hinder the convergence of different disciplinary investigations into a cohesive whole.

I believe it's necessary to clarify the terminology, concepts, and expressions used by scholars from various fields to discuss the phenomenon of Inner Speech (IS). This will help organize the abundance of provisional definitions, descriptions of its components, methodologies for investigation, neural correlates, involved cognitive functions, and associated pathologies found in numerous essays and overviews on the subject.

The notion of "inner speech" has been attributed to the influential work of the Russian and Soviet psychologist Lev Vygotsky (2012), who extensively studied the acquisition and development of language and social relations, as well as their internalization, in the first half of the 20th century. However, the definition of the concept remains controversial. It implies a psychological activity, as it is inner, predominantly internal, private, and tacit. Yet, being speech, it also assumes a relational, public, and spoken nature.

Personal introspection[3] serves as the primary source of knowledge about IS, although other methodological techniques, particularly those utilizing neuroimaging, have become increasingly available. Introspective knowledge can be highly valuable for the science of the mind, provided it is somehow testable and measurable. This necessitates a core agreement on the terms and concepts used to characterize standard aspects of IS. In this article, I aim to explicitly outline such standard characterizations by collecting and synthesizing suitable theoretical and analytical proposals from contemporary scholars of IS while critically examining a few of them.

I rely on standard *aspects*,[4] rather than features, of IS, as they are experienced by human beings in their original forms that encompass phenomenal dimensions. As Langland-Hassan (2020) explains «inner speech first appears on the scene as an introspectively salient component of everyday experience». The analysis of the phenomenology of IS, however, can be complex, since it relies on what is presented to the senses, which may differ from the actual reality. Nonetheless, it often serves as the initial step in an inquiry. Through introspection, individuals apprehend the fundamental manifestations of IS and are enabled to share them. Sharing the outcomes of these internal experiences, and making them accessible to others marks the starting point. As we embark from this point, it becomes necessary to disambiguate the concept of "IS", even in these early stages, by identifying the range of phenomena it encompasses and those that should not be included.

My article is organized as follows: in Section 2, I will examine IS as a mental and personal phenomenon, which is *intuitively* and generally understood and described as a unified experience based on introspection. Upon deeper consideration of its phenomenal aspects, it becomes apparent that IS encompasses various versions, which can be either complementary or mutually exclusive. However, I argue that to account for these phenomenal aspects, conscious experience is required. In Section 3, I will gather the characterizations of IS used by scholars from different disciplinary areas. I will extensively organize most of the collected material into dyadic categories, aiming to simplify the phenomenal taxonomy that covers the range of IS varieties. In Section 4, I will provide a summary and discussion of the experiences of IS that should or should not be taken into consideration. Finally, in Section 5, I will explicitly present my categorization and provide a brief conclusion.

2 What inner speech is: Neither a unitary phenomenon nor a unitary experience; definitely a conscious one

IS may appear to be a unified phenomenon but is, in fact, a multifaceted one. This perspective is supported by numerous studies investigating its neurophysiological and cerebral correlates, which demonstrate the activation of specific neurophysiological structures and cerebral regions corresponding to distinct experiences considered as components of IS (see Perrone-Bertolotti *et alii* 2014; Alderson-Day & Fernyhough 2015; Lœvenbruck 2018; Langland-Hassan 2015, 2020). These experiences are reported as discriminable. Upon closer examination, they reveal peculiarities that clearly differentiate certain aspects from others. Therefore, the phenomenal profile of IS should be understood as comprising distinct aspects that are experienced as unique.

This characteristic of IS indeed mirrors overt speech. Just as one engages in open dialogue by speaking, listening, and interacting with a conversation partner, a similar experience can be observed within the context of IS. But various aspects of overt speech are also experienced differently in IS. Likewise, it is reasonable to recognize that different disciplines specialize in studying distinct areas related to specific linguistic competencies, such as

semantics, syntax, and pragmatics, which can also be applied (to some extent) in the study of IS.

Some psychologists have addressed this diversity by utilizing structured questionnaires aimed at assessing the "everyday phenomenology" of IS (ALDERSON-DAY *et alii* 2018). However, the resulting classification is not entirely clear or systematic. Their objective was primarily to examine the relationship between IS and various psychopathological traits (MCCARTHY-JONES & FERNYHOUGH 2011), rather than formulating a comprehensive taxonomy. For instance, the *Varieties of inner speech questionnaire - Revised (VISQ-R)* presented participants with 35 questions which were calibrated based on criteria such as the dialogical nature of IS, its evaluative/motivational aspects, level of condensation, and the sense of ownership over the experienced voices, among others. However, these criteria were theory-laden, influenced by Vygotsky, and biased towards specific focal points, resulting in interviews with highly intricate (and potentially misinterpreted) statements. For example, participants were asked to agree or disagree to varying degrees with statements like «I use metaphors and expressions in my inner speech, such as "This is such a nightmare"». While these questionnaires are intriguing, their outcomes should not be regarded as particularly significant for a theoretical classification of IS varieties. They were not intended for such categorization (ALDERSON-DAY *et alii* 2018, 55-56).

Current research delves into the everyday experience of IS, but it has not yet arrived at a widely supported characterization. Peter Langland-Hassan addresses the challenge of an impartial understanding of IS in a recent and comprehensive overview. After examining other authoritative definitions, he proposes recognizing IS as «a form of mental language use or simulated speech that often occurs consciously, without any overt articulation» (LANGLAND-HASSAN 2020). His formulation intentionally allows for flexibility in order to encompass various experiences. However, this broad approach leaves room for potential confusion. Langland-Hassan states that IS *often* occurs consciously, implying that he acknowledges instances of IS that can be unconscious and may not necessarily involve a conscious *subjective experience*.

Since the purpose of this article is to provide a taxonomy of inner speech experiences, I do not delve into the possibility of unconscious inner speech. However, I acknowledge that it presents a challenge for any comprehensive theory of this multifaceted phenomenon. But, without relying on first-person experience and introspection, little can be gained in understanding IS. And here, an epistemological concern arises. If subjective, self-conscious experience[5] is not involved, it becomes unclear how one can refer to one's own or someone else's instances of IS. Without the assumption that an individual is able to recognize an inner utterance as their own or ascribe it to someone else, there is no way to identify an expression of language as speech. Regardless of how sophisticated and objective the techniques used to examine samples of internal speech may be, if the individual does not claim it as such, it cannot be objectively acknowledged as speech. Behavioral analyses are ineffective in studying language and overt speech, let alone inner speech. Neuroimaging can provide impressive brain images during speech-related tasks, but the interpretation still relies on first-person descriptions of the task processing. Unless a telepathic methodology is devised, subjective reports remain the primary tool for studying IS. For these reasons, certain, more mechanistic, approaches are not suitable for initiating an investigation into IS from the ground up (KOMPA 2023). Thus, the definition of IS proposed by Grandchamps and colleagues, namely, «the subjective experience of verbalization in the absence of overt articulation or sign» (GRANDCHAMPS *et alii* 2019), although minimal and subject to debate, is suitable for the purpose of this essay.

Indeed, I do not intend to exclude instances of unconscious, tacit linguistic processing. However, when it comes to developing a phenomenal taxonomy, it is preferable to make a clear distinction between the conscious experience of IS, which I consider constitutive of its phenomenal aspects, and the unconscious cognitive processes that underlie an individual's speech activity. Depending on how this distinction and the associated disciplines are understood, their respective roles can be either fully separate, complementary, or overlapping.

For example, according to Noam Chomsky, these roles are distinct and autonomous. He views linguistics, understood as a version of traditional cognitive psychology, as concerned with abstract and unconscious processing. Within this theoretical framework, Chomsky's interpretation of "inner speech" predominantly aligns with unconscious mental activity. He argues against the common usage of "Inner Speech" and asserts that

> [...] so-called "inner speech" is externalized speech, in fact, fragments of externalized speech. What is going on in our minds is inaccessible to consciousness, just as we have no conscious insight into the workings of other parts of our body. We can study them only from the outside, from what philosophers call a third-person perspective (CHOMSKY 2023, p. 355).

Chomsky has removed any reliance on conscious thinking from the field of linguistics, which focuses exclusively on analyzing abstract computational structures.

Anyone interested in IS does not necessarily have to be a staunch Chomskyan. However, for the sake of clarity, it is advisable to embrace the

conscious/unconscious distinction. If one's inquiry focuses on phenomenal aspects, then introspective, first-person experience is unavoidable. The domain of unconscious cognition, concerning abstract structures (whether computational or not), pertains to a different descriptive and explanatory endeavor. Exploring this territory relies on postulates and inferential hypotheses rather than direct introspection. There exists a gap between the conscious experience of IS and the abstract, inaccessible-to-consciousness formal structures that underlie models of higher-level cognition (such as reasoning, planning, and language processing). A missing link is needed to bridge this gap. Whether such a missing link exists or not, the distinction between conscious experience and abstract cognitive structures persists.

Perhaps the task of a philosophical analysis can aim at providing insight into the intermediate space between cognitive unconscious structures and the conscious awareness of engaging with tokens of speech in natural language, or fragments thereof. Getting to the bottom of an issue like this could contribute significantly to current hypotheses about consciousness and self-awareness. More developed hypotheses about consciousness and self-awareness, in turn, can provide a subtler framework for investigating IS. There are good reasons for undertaking a comprehensive investigation into these topics.

In the next section, I will scrutinize the various aspects through which IS manifests itself.

3 The varieties of IS experiences

There is little doubt that the majority of humans experience IS. While there are a few documented cases of individuals lacking IS (see LEVINE, CALVANO & POPOVICS 1982), (such as those with *anaural* conditions associated with *aphantasia* - see HINWAR & LAMBERT 2021), these are exceptions. Depending on the methodology and factors such as the age of the subjects involved, people are reported to experience IS for approximately one-quarter of their conscious waking time (see HEAVEY & HURLBURT 2008; UTTL *et alii* 2012; LŒVENBRUCK 2018). However, this experience is not uniform and can vary in its characteristics. In the following section, I will present some general categories that arise from the discussions of authors who have investigated the diverse facets of IS. I have organized these categories into conceptual pairs, some of which are widely recognized while others will be subject to further debate.

3.1 IS in reading and writing

Lœvenbruck (2018, §2.3), in her review, has included IS that is associated with reading and writing. Indeed, both of these activities are aligned with IS, as evidenced by introspection and other objective measures, and are considered important for observational and descriptive methodologies. However, the nature of these activities is much more complex compared to other forms of IS. Reading is a highly sophisticated capacity that requires various cognitive resources beyond inner speech alone, such as focused attention, identification, discrimination, selection, organization, interpretation, and comprehension of symbols. These skills represent a significant cognitive load, making this phenomenon more intricate. Writing, in addition to reading, involves additional cognitive and sensorimotor processes that enable the coordination of fine hand and finger movements required to produce written letters and words. Therefore, while reading and writing often involve IS, they cannot be considered as untamed forms of it.

3.2 Imagined speech and/or actual speech

The main point to consider is the nature of IS: is it a product of imagination or actual speech? This issue can be reframed as asking whether IS is essentially the same as External Speech (ES) or fundamentally different.[6] Both options need clarification. IS can be seen as a variation of overt speech, albeit without articulation or emission of a phonological structure. It cannot be considered identical to external speech, but it is notably similar to it.

On the other hand, if IS is meant to be something significantly different, it could be conceived as the simulation of speech, similar to how actions can be imaginatively simulated without engaging the entire sensory-motor apparatus required for actual execution. For instance, when Mick feels and thinks that he is silently talking, asking himself, "Should I stay or should I go?", is he imagining himself asking, or is he genuinely asking himself? It is evident that he does not overtly ask, as he does not articulate any words aloud; furthermore, the question is directed solely to himself. This issue raises the ontological problem of whether IS is realized through an imagined situation or an actual act of speech, albeit unarticulated, not verbalized, or not publicly expressed (like claimed by GREGORY 2016, 2017a, 2017b).

Gregory holds that the differences between IS and ES are less significant than their similarities. Indeed, there are some relevant distinctions: IS is not vocalized, as mentioned previously, but ES is; IS does not appear in a communicative context, while ES does; IS does not perform speech acts, whereas ES does. However, these differences do not dismiss the core similarities between IS and ES: the feeling of effectively speaking when one is silently speaking, the apparent identity of many sentences of IS with many sentences of ES, and the semantic evaluability of the sentences of both kinds.

According to Gregory, ES and IS can be conceived as two alternative versions of actual speech.

Maybe, though, to hold this position, the notion of "actual" and also of "speech" should be clarified with some detail and not left to intuition. Of course, a more exhaustive explanation requires a clear stance toward what is meant by "speech" that in turn entails a straight theory about language: these are other philosophical tough nuts to crack to which Gregory, like any other scholar, must dedicate specific reflection.[7]

3.3 Inner speaking and/or inner hearing

This distinction appears to be less controversial. Hearing and speaking are two distinct activities in overt speech, and they are clearly separated when the listener is not the same person as the speaker. As noted by Hurlburt and Heavey (2018), even the same individual can easily recognize the difference: they can produce an utterance as a speaker and then hear it played back on a tape recorder. In these situations, it is easier to identify experiences of speaking and hearing, as they can be associated with physical linguistic tokens such as emitted sounds or articulated signs, which can be perceived through the senses. In the case of IS, the division may be less obvious but still perceptible (HURLBURT, HEAVEY & KELSEY 2013). Inner speaking involves the active participation, namely the production of speech, of the individuals who experience it. Inner hearing, on the other hand, is only perceived without being actively performed.[8] The sense of agency is crucial in distinguishing (inner) speaking from hearing, as the spoken words or sentences are simultaneously heard.

However, there may seem to be instances of IS in which the internal speech is heard but not recognized as being produced by the individual experiencing it. These experiences are referred to as auditory imagery by Hurlburt and Heavey (2018), who distinguish them from true IS, which is actively performed. If we accept this distinction,[9] then IS can be characterized as a voluntary act, while mental imagery is not. Thus, inner speaking is a voluntary mental activity, recognized as such by the agent performing it and claimed as their own.

On the other hand, inner hearing does not necessarily involve a self-ascribed sense of agency but is often experienced by the subject as a recipient or passive participant. An individual usually does not have control over what they hear; they simply happen to hear, much like they happen to feel. However, inner hearing can be further specified in an assorted variety of cases. For instance, one can hear themselves speaking, and they can also hear someone else speaking. Thus: (a) One can unintentionally hear themselves and others speaking to themselves or others when, for example, they somehow remember an episode in which something was uttered ("Did I/you buy milk?"), as well as (b) They can hear themselves in the act of speaking intentionally to themselves, for example, while self-instructing about how to execute a dance step, or (c) They can hear themselves talking to others, such as while watching a football player stepping up to take a penalty, silently imploring him to not miss the goal; and (d) They can also hear themselves or others speaking in an imaginary context, like when envisioning John asking "Do you want to dance?". These phenomena are regular episodes of inner life that arise from memory and thinking (CARRUTHERS 2018). Inner speech encompasses the inner generation of active verbal speech and the distinctive experience of hearing oneself speaking or the experience of hearing others speak. Clearly, if speaking, or even imagining oneself or others speaking, is voluntary, the spoken expressions are felt by the hearer as their own. These are particular experiences that differentiate the various forms of inner speech, even though they are considered parts of the same phenomenon.

The identification of an act of IS as actively performed by one's own agency is relative to an individual's inner sense relative to the subjective perception or awareness of that act. Our characterization of IS depends on the individual's first-person account and their description of it. This leads to another related distinction concerning the controllability of IS, the sense of ownership associated with a particular internal utterance, and the mental attitude accompanying the experience of IS.

3.4 Spontaneous and/or elicited IS

The sense of agency associated with IS depends on the circumstances under which it emerges, and its description is relative to how it is reported by those who experience it.

As IS is not directly observable, there are essentially three general strategies for analyzing it indirectly. One approach involves the implementation of experimental behavioral protocols, while the other relies on the examination of explicit self-reports provided by interviewees. In behavioral experiments, participants are presented with tasks, primarily verbal in nature, that are designed to elicit engagement in IS. For example, participants may be asked to silently judge whether two words are homophones or rhyme, silently count the syllables of a word, or silently repeat words or sentences (often tongue-twisters). However, these experimental situations may not accurately capture the natural occurrence of IS, as participants are prompted to engage in it rather than doing so spontaneously.

An alternative approach, which aims to account for spontaneous IS, utilizes various structured questionnaires. These questionnaires also have limitations, as they can introduce biases in the responses due to factors such as the wording of the questions and the limited range of possible answers, as well as

other factors inherent in survey methodologies.

A third methodological approach involves the procedure developed by Russell Hurlburt and colleagues (HEAVEY & HURLBURT 2008; HURLBURT & HEAVEY 2018) known as *Descriptive Experience Sampling* (DES), which could perhaps be considered a variant of structured questionnaires. In DES, participants are equipped with a beeper that randomly beeps throughout a designated period. After each beep, participants are required to document their experience immediately prior to the beep. At the end of the session, they collaborate with investigators to refine their reports, aiming to provide the most accurate description possible of their experiences. DES offers a spontaneous snapshot of an individual's inner experience, albeit with some distortions. The proponents of DES acknowledge that the method is influenced by preconceptions and challenges in interpreting the reported information (HURLBURT & HEAVEY 2018, pp. 175, 179-187). Therefore, obtaining a comprehensive understanding of spontaneous IS is not straightforward. This difficulty is inherent in the analysis of subjective experiences, as IS is considered such. Given that subjective experiences are inherently first-person phenomena, it is challenging to capture them from an objective, third-person perspective. Introspection remains the primary source of knowledge about IS, and while efforts may be made to complement it, we must grapple with its limitations.

3.5 Willful IS and/or mind-wandering

Despite the inherent challenges in relying on personal reports of IS experiences, it is generally accepted that both elicited and spontaneous instances of IS exist. However, there is a wide range of forms within the category of spontaneous IS, which introduces certain ambiguities. Lœvenbruck, drawing on Perrone-Bertolotti *et alii* (2014), distinguishes between willful inner language (referring to IS) and verbal mind wandering. Describing inner speech/language she writes:

> We often deliberately engage in short instances of inner speech, for instance when we count, make a list, or schedule our weekly objectives. We can engage in longer sophisticated inner talk, carried out in full sentences, when we prepare a lecture, think hard about an argument, or imagine possible future conversations. These short and long instances of inner language can be referred to as "willful" or "deliberate" inner language. (LŒVENBRUCK 2020, §2.1)

The intended meaning behind Lœvenbruck's distinction is not entirely clear. Instances of IS can vary in length and content, ranging from short and specific targets to longer and more articulated reflections or counterfactuals. The cases mentioned are said to involve active, voluntary mental verbal generation in situations that require intentional and goal-directed acts of speech, demanding the attention of the subjects. While these instances can be considered spontaneous samples of IS, further details are not provided. Is repeating a tongue-twister considered a form of willful IS? What about mentally reviewing a guest list or silently humming the refrain of a song? It is not entirely clear whether these actions are consistently, frequently, or rarely willed. One might recite a tongue-twister or hum a tune, sometimes intentionally and other times involuntarily. When considering longer and more sophisticated inner dialogues, preparing a lecture may fit the criteria, but engaging in deep thought about an argument is not as straightforward to conceptualize. Both operations require a certain level of intentionality, and thus willed elaboration. Each individual approaches a topic with a personal and private perspective that is not easily generalizable. Therefore, defining willful IS becomes a challenging task.

Willful IS, as described by Perrone and colleagues and Lœvenbruck, is contrasted with a «more passive form of inner language», referred to as *verbal mind-wandering*. Verbal mind wandering is characterized as «flowing, spontaneous, unconstrained, external-stimulus-independent verbal thoughts». (LŒVENBRUCK 2020, §2.1) But the concept of verbal mind wandering is even less clear than willful IS; there is a lack of universally agreed-upon definitions and conditions (SMALLWOOD & SCHOOLER 2015). It has been suggested, not for nothing, to approach mind wandering within the framework of family resemblances due to its heterogeneous nature. (SELI *et alii* 2018)

Considering IS as either willful or mind-wandering seems futile and conceptually misaligned. Willful IS, characterized as intentional and performed with a certain intention,[10] is described as a purposeful speech act aimed at achieving a goal. However, it cannot be directly opposed to mind-wandering, as the understanding of mind-wandering includes both intentional and unintentional versions. The distinguishing criteria between IS and mind-wandering appear to be limited to purposelessness and lack of attention. Yet, these features are not exclusive to mind-wandering. Instances of IS can also be purposeless, as individuals may engage in it accidentally without a specific goal. Similarly, mind-wandering involves attention, albeit shifting from one item to another without a specific focal point.

The distinction between willful IS and mind-wandering may not be particularly relevant in characterizing the experience of inner speakers. It would be more appropriate to define and clarify the concept of mind-wandering before attempting to incorporate it into the discussion.

3.6 Contained and/or ruminative IS

There are different forms of IS, characterized by how they manifest and how they are perceived. IS serves as a regular mental activity that complements human cognition, contributing to working memory, executive function, and other mental capacities (LANGLAND-HASSAN 2020; ALDERSON-DAY & FERNYHOUGH 2015). Lœvenbruck (2018) refers to this normal performance of IS as contained IS. However, when an individual's engagement in IS becomes excessive, repetitive, and dominated by self-criticism, it can lead to rumination, which can be seen as a particular form of IS associated with pathological states (NALBORZCYK 2019).

The distinction between *contained IS* and rumination highlights a standard form of IS that has not been adequately defined yet. The focus on mind-wandering as an anomalous variant is not particularly relevant for a comprehensive phenomenal taxonomy.

3.7 IS as monologue and/or dialogue

A common experience of inner speech can take the form of either a monologue or a dialogue. When we speak to ourselves, we often use the first-person pronoun. For example, like Spiderman swinging from one building to another, he might silently say to himself, "I should urgently change my suit, or it will rip". Alternatively, he could quietly mutter, "You need to change your suit, Parker, or you will look like a homeless person". The internal monologue, as a variant of inner speech, can refer to oneself in both the first and second person. I believe that even when referring to oneself in the second person, it can still be considered a monologue as long as it does not involve other individuals. However, when one starts addressing or interacting with a second person, inner speech takes the form of an actual dialogue. As Oleś and colleagues (2020) make clear,

> [...] an inner monologue can easily evolve into an internal dialogue between two subjects inside one's mind - between different parts of oneself or between oneself and the imagined partner. In other words, there may be qualitative and quantitative differences in the nature of self-talk and internal dialogues (p. 2).

Yet, the dialogical nature of IS needs to be further clarified. I will revisit this topic shortly. First, let's discuss the concept of inner monologue.

As I have previously mentioned, there are at least two ways in which individuals engage in self-talk: using the first person or the second person. However, this distinction holds little significance (apart from the ones mentioned in OLEŚ *et alii* 2020), as it primarily relates to grammatical constructs. Whether Spiderman adopts the first person or the second person in his self-talk is mainly a matter of linguistic structure. A monologue can also be conducted in the second person because the speaker is aware that they are addressing themselves. The key factor lies in the awareness of the speaker regarding their own identity. Regardless of the specific grammatical structure used in a monologue, what matters is the monologist's awareness of addressing themselves. The identity between the speaker and the recipient of a generated message defines the dynamics of an inner monologue. Unlike in real conversations, the psychological complexities of entailments, implicatures, and presuppositions (GRICE 1989; SPERBER & WILSON 1995) can easily be disregarded in the internal talk one has with oneself.

The same consideration applies to the identification of an actual dialogical structure in certain cases of inner speech. Building on the Vygotskian perspective, some authors have taken the notion of inner speech as a transformed and internalized version of overt speech seriously. Vygotsky viewed language primarily as an intersubjective and social activity, inherently dialogic in nature. However, how can an individual engage in a dialogue with themselves? After all, a dialogue entails a conversation or exchange between (at least) two distinct persons, characters, or parties. An individual is not typically in a position to engage in a dialogue, as they are a singular entity, unless there is some form of internal division or duality. Therefore, understanding the dialogical nature of inner speech requires a certain level of interpretation.

Gregory (2017a, 2017b, chapter 2) has extensively discussed the concept of "dialogicity" in relation to inner speech. Drawing from Fernyhough's work (2004, 2008, 2009), Gregory has outlined certain criteria that determine whether a mental process, such as inner speech, can be considered dialogic (for more details see GREGORY 2017b, chapter 2). According to these criteria, a mental process is dialogic when an agent is capable of representing multiple perspectives toward a particular state of affairs in a dynamic, intersubjective, and continuously evolving manner. These perspectives may include those attributed to oneself in different temporal or spatial contexts, as well as those attributed to other individuals.

These other individuals, often referred to as "virtual interlocutors" by Fernyhough, can be imagined versions of the agent themselves or entirely fictional subjects. But Gregory (2017a) denies that inner speech is effectively dialogic in the way Fernyhough proposes. The distinction between those perspectives does not fundamentally alter the nature of the dialogic experience. Whether the alternative perspectives are projections of the agent themselves or ascribed to other imagined individuals, the outcome remains the same. These perspectives are the result of mental processes per-

formed by the agent and are consciously present to them; they cannot willfully ignore them. While a person may pretend to engage in a dialogue with others, they cannot pretend that the intentions and beliefs they attribute to these fictional others are not their own mental constructs. The psychological identity of these others is a direct consequence of the agent's mental processing, which includes their own intentions and beliefs.

In this way, the dialogical nature of inner speech becomes apparent. It unfolds as if multiple individuals are participating, even though ultimately there is only one speaker – the agent themselves – who maintains their own identity and self-consciousness. Therefore, inner speech is undoubtedly monologic in nature, but it can also be described as dialogic, even though the dialogicity is not actualized. The term "inner dialogue" is used descriptively to represent the dynamic unfolding of one's own thinking in a dialectical manner. Processes such as wondering, self-questioning, and self-replying are different ways in which thoughts can be articulated, providing alternatives to the first-person modality while still remaining within the first-person perspective.

3.8 Controlled and uncontrolled IS

I have previously argued that IS cannot effectively be dialogical because an inner speaker who adopts alternative perspectives is aware that the mental principles, processes, and attitudes on which those perspectives are based are their own. However, it is possible for someone to take an alternative perspective without being aware of it. This can occur when a person ignores certain mental states, processes, and attitudes, not recognizing them as under their control or feeling a sense of agency over them, even though they may consciously perceive and experience them. This is similar to the well-known condition of dreaming, which is highly valued in psychoanalytic theory. When dreaming, a person perceives and experiences events but lacks control over them. Thus, they are aware of what is happening but do not have monitoring knowledge of it. This also applies to verbal episodes experienced in dreams.

For example, in the dialogue *Crito*, Socrates dreamt of a woman dressed in white who spoke directly to him, saying, «Socrates, on the third day wouldst thou come on fertile Phthia» (PLATO, *Crito*, 44b). Socrates reported what the woman said without implying that her words had been generated by him taking another perspective. He identified the woman as another subject, effectively engaging in a (possible) dialogue. In his dream state, Socrates perceived her words as truly spoken by someone other than himself. Although it is possible that Socrates may have heard those words in another place or at another time, what matters is that he perceived them as being said by someone else. In his dream, he was not consciously managing the conversational situation and did not have control over it. His identity was only partially defined. Socrates' condition in Plato's dialogue represented an altered state of consciousness:

> When sleep mentations engage our minds, we lose contact with reflective thought (we are not aware that we are sleeping), with memory (we do not remember that we just went to sleep), with the reality-status of our experience (we are typically not aware that what we experience is a hallucination or a delusion, and we are unaware of our real surroundings) (REVONSUO, KALLIO & SIKKA 2009: p. 198)

The broader characterization of an "altered state of consciousness", as described by Revonsuo and colleagues, which involves an alteration in the informational or representational relationships between consciousness and the world, can also be applied to analogous uncontrolled experiences of IS. Examples of cognitive states modified by the use of drugs can serve as an illustration (MUNN 1973). In altered states of consciousness, such as during dreams or under the influence of drugs, individuals effectively experience things from alternate points of view. Thus, it's likely that they also experience the circumstances in which someone else is speaking, assuming an alternative perspective without having control over it. In such cases, inner speech can actually be considered dialogic, as one is engaged with an experience that they perceive as alien to themselves because they do not control it, while simultaneously being experientially a bystander of it.[11]

Another similar and significant example is the widely studied phenomenon of *Verbal Auditory Hallucinations* (VAHs) (cf. GREGORY 2016; WILKINSON & FERNYHOUGH 2017; FERNYHOUGH *et alii* 2019). While VAHs are commonly associated with schizophrenia (BRÉBION *et alii* 2016; SWEENEY 2018), they can also be present in other psychiatric and neurological conditions (LARØI *et alii* 2012), and even nonclinical individuals may experience them (SOMMER *et alii* 2010).

Various hypotheses have been proposed regarding the etiology of VAHs (see FRITH 1992; TIAN & POEPPEL 2012; GRANDCHAMP *et alii* 2019). However, the experiential characterization of VAHs is based on the lack of a sense of ownership associated with the inner speech acts performed. In each of these situations (such as dreaming, drug-induced states, or hallucinations), individuals experiencing IS as listeners do not recognize the silently spoken words as their own but attribute them to external sources. Once again, the uncontrolled experience of IS is characterized by the subjective and conscious awareness of it, even though it is perceived as generated by someone else.

3.9 Concrete and abstract, expanded and condensed IS

The debate about the format of IS concerns its ontological status, whether it is implemented by abstract, amodal, and symbolic representational structures or by concrete, sensory, and motor processes (JONES & FERNYHOUGH 2007). The distinction between the different formats of inner speech (IS) is often interpreted as reflecting differences in conceptual nature. Abstract concepts, typically considered more complex (BARSALOU 2003), morphologically different (LIEVERS, BOLOGNESI & WINTER 2021) and less iconic (LUPYAN & WINTER 2018) from concrete concepts, are also conceived as more detached from sensory modalities and more closely linked to interoception (CONNELL, LYNOTT & BANKS 2018; VILLANI *et alii* 2021).

However, this contrast is not justified, as IS is heterogeneous and involves, like overt speech, more than one modality and more than one kind of concept: abstract representations of IS structures are complementary to sensory-motor patterns that implement IS tokens, rather than mutually exclusive. IS reflects this heterogeneity in its phenomenal profile as experienced by *Inner Speakers* (LŒVENBRUCK *et alii* 2018). It is recognized as spanning from an amodal, unsymbolic, and disembodied version to a phonological, articulated, and embodied version.

Another characterization of IS concerns whether it is condensed or expanded. Condensed tokens of IS have been described as having a limited syntactic and semantic apparatus, in line with Vygotsky's previous views, while expanded tokens, on the other hand, exhibit the fluency typical of overt speech.

Some scholars have hypothesized that there is a correspondence between the degree of concreteness and expansion, and between the level of abstraction and condensation of IS. According to this view, the more a token of IS involves abstract concepts, the more it is condensed, whereas the more it involves concrete concepts, the more it is expanded (FERNYHOUGH 2004; GEVA *et alii* 2011). However, this conjecture is not confirmed by experimental data, which are not consistent with it and, in some cases, even contradictory (BORGHI & FERNYHOUGH 2022).

These two dichotomies (abstract/concrete, condensed/expanded) in IS are mainly derived from the reports of experimental subjects, as they rely on descriptions of conscious attendance to the experiences of IS; it would be difficult to obtain them otherwise. However, I see a problem that arises from this approach. Indeed, a sample of expanded IS is easily identifiable as an unuttered sentence formatted in a natural language: this could be considered a canonical example. E.g., someone can speak to themselves late at night while watching TV (or surfing the internet): "It's bedtime. Tomorrow's flight is at 8 AM". Similarly, a sample of concrete IS will involve more sensory-motor patterns, such as an athlete thinking, "I am faster than this. I must push harder, I am faster than this". Moreover, there are instances that encompass both concreteness and expansion, such as a mountain climber planning their moves: "First, I grab that hold on my left side. Then I move my right foot onto the hold behind". Each of the examples above is evident as they are expressed within a linguistic framework using ordinary sentences of a natural language.

Things get complicated when tokens of IS manifest themselves in structures that are not linguistically orthodox. These are the specimens that are supposed to represent condensed IS, which possibly could also be abstract (although abstraction is not a condition for condensation). Yet, what are the examples of condensed IS? Do they correspond to effective tokens of IS regularly entertained by common folk?

The influential legacy of Vygotsky proposes interpreting condensed IS as fragmentary, *predicative*,[12] and semantically idiosyncratic. It is fragmentary because one word or an incomplete phrase can replace a structured sentence. For example, "... umbrella ..." could replace "I shall remember to take the umbrella" or "... straight on ... Casino ... left ..." could replace "First, I go straight on at the Casino, then I turn left". It is *predicative* because IS tokens usually have predicates without expressed subjects. For instance, often Jill leaves home to go to work, and after two minutes comes back in because, as usual, she has forgotten her lunch bag; thus, Jack's thinking "... is back again ... forgotten her lunch, of course ..." demonstrates the predicative nature of IS. Finally, it is semantically idiosyncratic because the meanings associated with words in IS always change according to different types of situations, from individual to individual, and are never the same and publicly accessible.[13]

Despite providing an apparently detailed characterization of condensed IS, several doubts may arise about its categorization. Indeed, Vygotsky himself appealed to literary masters such as Tolstoy, Dostoevsky, and Gogol to exemplify condensed IS, but this approach was not very explanatory. Thus, the status of condensed IS does not entail a clear structure or set of structures. The border between expanded and condensed IS is not very sharp. There are certainly several gradual stages between IS tokens that are merely internalized overt speech utterances and thinking in pure meanings (see VYGOTSKY 2012, chapter 5). Furthermore, some empirical evidence (HURLBURT & HEAVEY 2018, pp. 176-177) suggests that condensed IS occurs infrequently, less frequently than hypothesized by Vygotsky; most often, it appears in complete sentences. Therefore, this kind of IS has to be judged with caution, as it may be misleading, at least to some extent.

3.10 Unworded and unsymbolized IS

And the aspects of *condensed* internal speech (IS) are not the only thing to be considered indistinct. Inquiries into silent talking have primarily focused on tokens that can be labeled as verbal thoughts, thus endorsing a linguistic format. However, there are scholars who argue that IS can take forms that are devoid of any symbols and words; this is the case of *unsymbolized thinking* and unworded speech. Agustín Vicente and Fernando Martínez-Manrique have emphasized these notions (VICENTE & MARTÍNEZ-MANRIQUE 2016; VICENTE & JORBA 2019), asserting that they represent effective, albeit uncommon, experiences of IS. Relying on the work of Hurlburt and collaborators (HURLBURT & AKHTER 2008; HURLBURT, HEAVEY & KELSEY 2013), they recognize unsymbolized thoughts as «compositional conceptual phenomena, with semantic and syntactic features analogous to those of the contents of utterances» (VICENTE & MARTÍNEZ-MANRIQUE 2016, p. 173). Building upon preceding hypotheses by Jeannerod and Pacherie, they speculate that if a person initiates the process of expressing a thought in language but then abandons it at an early stage, the content of that thought may become conscious without requiring symbolic representation.

Conceiving an example of unsymbolized thinking may seem simple: Hurlburt and his collaborators provide some, and the following is what I have conceived of: I could imagine a situation in which a rude person uses her mobile phone in a cinema hall. Initially, I would feel inclined to say something to her, but then I would abandon the idea, fearing that my protest might be more disruptive. My disposition toward her, my disdain, is on the verge of being verbalized but does not take shape in words; the expression of my attitude is identifiable in terms of content, though not fully describable.

However, both the examples provided by Hurlburt and his colleagues and the one I have proposed evoke the impression that they entail some form of implicit incongruity. This is because they describe in words, which are inherently symbolic, experiences claimed to be non-symbolic or unsymbolized. It is indeed true that individuals reporting experiences of unsymbolized thinking «struggle in the reporting of wordless experiences that they themselves believe to be impossible» (HURLBURT & AKHTER 2008, p. 1369), but this does not necessarily mean that they were entertaining thoughts that were not symbolized. Perhaps those unsymbolized thoughts were unconsciously engaged, as Carruthers has noted, or they had been shaped by symbols that were not encoded in words and are not easily translatable into words. It may often happen that certain experiences cannot be described with words, but this does not imply that those experiences are not encoded in some sort of symbolic format. Remember: unsymbolized thinking does not only require that thinking occurs without the experience of words but also without the experience of any other symbol. Furthermore, during unsymbolized thinking, a person might know what they are thinking about but not how they are thinking. Knowing what a thought is about is different from knowing what a thought is. The difficulty in reporting may lie in expressing the form of thought rather than in determining its form or expressing the form of the thought itself. Moreover, it can be significantly relevant how expressing the form of thoughts in words affects the report (PERSAUD 2008). Certainly, these kinds of doubts might be raised against all introspective reports: of unsymbolized thinking as well as of inner speech or images. However, this does not necessarily mean that they are less effective in relation to the phenomenon of unsymbolized thinking, which is, to say the least, a confusing notion.

Cases of unworded speech occur when someone has the sense of speaking and is aware of the vocal characteristics of such speech, as well as its meaning. There can be cases of partially unworded speech, in which some words or expressions are missing, as well as cases of totally unworded speech, in which no words at all convey the content that is grasped. Apparently, the insight into the timing of the tokens of wordless speech makes it understood as effective speech, despite the absence of words, and distinguishes it from unsymbolized thinking, which is characterized by an atemporal, instantaneous dimension.

For example, "That is a very strong _____ – maybe it is a gas leak!" is a plausible example of partially unworded speech, where "odor" is the missing word (VICENTE & MARTÍNEZ-MANRIQUE 2016, pp. 179-180). To think of totally unworded speech, one could imagine something internally realized, analogous to a form of *grammelot*: a satirical theater actor performing the parody of a language that has no meaning at all, yet it seems like a meaningful flow of language. In this way, a sequence of internally perceived sounds, signs, and thoughts, like an internal *grammelot*, appears to be a structured token of inner speech because of its rhythm, tunes, and timing, even though there may be no actual sound, sign, or thought - only the feeling of it is present.

Unsymbolized thinking and unworded speech can be described as specific instances of IS, but they are not universally and uncritically accepted as such. Vicente and Martínez-Manrique are cautious about these phenomena, as they are difficult to characterize and complex to argue for; some authors even deny the existence of unsymbolized thinking (CARRUTHERS 2009; TYE & WRIGHT 2011), while others call for a clearer definition of it (GREGORY 2018). The nature of unworded speech

is also not clear: Alderson-Day and Fernyhough identify it as condensed IS (ALDERSON DAY & FERNYHOUGH 2014). Whether these two hypothesized versions of IS are legitimate is an issue that still needs to be settled (see next section).

I believe I have provided a suitable overview of the various experiences that can constitute the human understanding of IS. While I don't claim it to be exhaustive, it does encompass a significant set of dimensions under which IS is characterized, both in common sense and in some more rigorous empirical and experimental conditions. The diversity of IS experiences encompasses features that have been examined by various scholars in different contexts, ranging from the most evident to the most speculative, from the simplest to the most peculiar.

Now, a critical synthesis of these aspects is necessary.

4 A summary of and a commentary on the variety of IS experiences

The rough taxonomy that I have just outlined is based on common sense, introspective accounts, and analytic insights.

In this overview of the aspects that characterize different experiences of IS, the most straightforward forms are observed in reading and writing (cf. *supra*, §3.1). This is likely because they are the easiest to test. However, since these activities involve cognitive procedures and processes that are more complex than basic IS, they are not particularly instructive. There is reasonable evidence to consider IS as not significantly different from ES, viewing IS as an effective manifestation of actual speech (cf. *supra*, §3.2). Therefore, IS should not be confused with a form of imagined speech.

The argument in favor of this claim, as presented by Gregory (or so I presume, cf. Gregory 2017b, chap. 2), asserts that every instance of supposedly imagined inner speech ultimately merges into actual inner speech. However, his focus was on the first-person perspective and the hypothesis of imagining speaking from within – a situation in which imagining speaking can be confused with intending to speak, involving mental imagery. While mental imagery can be considered a sufficient condition for imagination, it does not necessarily equate to the same experience. Furthermore, in this context, imagination is paired with the sensation of generating speech and speaking oneself. However, one can also consider instances of inner speech produced by others – an experience that eliminates the potential confusion. In this case, it is not possible to intend to hear others speak from within. This hypothesis can lead to understanding speech attributed to others as effectively imagined, highlighting a real, yet non-critical, distinction.

The distinction between imagined and actual IS becomes more apparent when contrasting the experience of spoken IS with heard IS (cf. *supra*, §3.3). Spoken IS is typically perceived as voluntary, with the individual feeling that they are intentionally generating the speech and retaining a sense of ownership over it. Most of the time, they hear themselves speaking IS, although there may be instances where they do not recognize themselves as the actual speaker. There are also cases where they explicitly hear others speaking: in these situations, characterizable as heard IS, the speaking performance of others can be recognized as not depending on the hearer's intentions. Both spoken and heard IS, however, can be considered different forms of imagined speech, as pointed out by Gregory (2016, p. 660, fn).

The sense of agency and ownership associated with internally spoken inner speech presents a methodological challenge, whether it arises spontaneously or is induced experimentally (cf. *supra*, §3.4). Despite the various strategies employed to investigate inner speech, it is evident that no approach provides an immediate understanding of this phenomenon. The current investigative techniques, such as behavioral tests, structured questionnaires, and the use of the Descriptive Experience Sampling (DES) method, all yield somewhat biased results.

Nevertheless, individuals often report their experiences of IS as being differentiated. The dichotomy between *willful* and *mind-wandering* IS (cf. *supra*, §3.5) was perhaps intended to capture the distinction between IS acts that serve a specific purpose or goal, and mind-wandering episodes of IS that appear to lack an evident objective. However, this distinction remains unclear and nonspecific and requires further explanation in order to be adopted effectively. Similarly, the dyad of contained and ruminative inner speech (cf. *supra*, §3.6) is not particularly fruitful, as it relies on parameters that cannot be definitively fixed. The conditions that contribute to a normal IS performance are highly fluid and variable.

IS can be characterized as monologic or dialogic (cf. *supra*, §3.7). However, considering this difference as basic is questionable. In normal circumstances, when the agent of an action or the author of an utterance is aware of their own actions and recognizes them as their own, they will not attribute them to someone else unless they are experiencing a pathological condition. Therefore, engaging in a dialogue within oneself is not possible, as there is no interaction with another individual. Instead, the individual relates to themselves, acting as the sole cognitive source of an ideal or imagined interlocutor. While the structure and form of inner speech may resemble a dialogue, it is not an actual dialogue since it lacks the presence of multiple agents. What is labeled as dialogic speech or dialogue in this context refers to an individual's unique internal flow of speech and thought, which takes on the form of a

dialogue but does not involve true interaction. The perception of an effective interlocutor may occur in altered states of consciousness or hallucinatory experiences (cf. *supra*, §3.8).

The experiences of IS that are not attributed to oneself raise perplexities about their nature. Similarly, experiences in which there is self-awareness, but the description is vague, can be misleading. Since Vygotsky's work, there has been a persistent biased issue in characterizing IS, which is still evident in contemporary literature (cf. *supra*, §3.9). While the notions of *abstract*, *concrete*, and *expanded* IS can be roughly understood, the concept of *condensed* IS remains less clear. Despite some attempts to define "condensed" IS, it has not yet been described in a way that adequately captures its multifaceted manifestations. This concept is important, but elusive, encompassing a range of cognitive phenomena, from thoughts that can only be partially verbalized or are inadequately verbalized, to thoughts that are compressed into a single word. Even more unclear are cases of *unsymbolized* and *unworded* IS (cf. *supra*, §3.10), which supposedly involve thoughts perceived as mental contents but are not recognized as encoded into linguistic or other symbolic forms. Indeed, if mental contents, experienced in forms not characterizable as symbolic, can be speculated upon, it becomes even more challenging to hypothesize an alternative representational format capable of rendering such unstructured experiences. Furthermore, if these experiences are represented as structured, it is barely conceivable that they could be nonsymbolic.

None of the broad characterizations of IS experiences mentioned above are intended to offer a definitive categorization or precisely identify the exclusive phenomenal aspects of silent talking. Some of these aspects are readily recognizable, while others are more controversial. Experiences of IS can be inferred from activities such as reading and writing, and they can be observed in imagined and actual, spoken and heard, spontaneous and elicited, willful and mind-wandering, contained and ruminative, monologic and dialogic, and self-controlled and uncontrolled forms. These conceptual pairs all share a common feature: they identify instances of IS in linguistic terms. The linguistic format of IS is what allows us to refer to a specific episode of IS. This aspect may seem trivial, but it should not be taken for granted. Furthermore, some authors argue that it is possible to abstract instances of IS from a linguistic or verbal structure (cf. *supra*, §3.9 and §3.10).

While it is true that the hypothesis of abstracting instances of IS from a linguistic or verbal structure has been explored and supported by some scholars, I am reluctant to fully embrace it. The first reason for my hesitation stems from the vagueness and ambiguity surrounding the description of certain IS experiences, as I have already noted. Examples such as *condensed* IS, *unsymbolized* thinking, and *unworded* thinking often involve convoluted explanations that can be misleading and lack clarity.

The second reason is more of a fundamental question concerning the nature of (inner) speech. It appears not only peculiar but also contradictory to discuss speech, whether inner or overt, without involving any linguistic elements. Whenever speech is referenced, be it in common sense or more specific contexts like experimental conditions, linguistic components cannot be disregarded. Linguistic terms are either directly used, reported by individuals as corresponding to their thoughts and experiences or indirectly employed in the description of thoughts and experiences that resemble linguistic tokens without being identical to them. However, even when not explicitly identified as linguistic tokens, these thoughts and experiences are characterized using linguistic terms. As these linguistic tokens are meant to account for thoughts or experiences that are considered pseudo-linguistic or language-like, they become linguistic representations of quasi-linguistic phenomena. These linguistic representations may mirror quasi-linguistic thoughts or experiences with isomorphic structures or express them using radically different structures. In any case, the representative structures of quasi-linguistic phenomena possess a linguistic nature that cannot be escaped. Therefore, the experience of inner speech, whether directly or indirectly, needs to be linguistically represented. After all, "speech" is the outcome of an articulatory and phonological skill ap-

Table 1 Summary table: The features used to characterize IS can be found ...

Reasonable	**Plausible**	**Questionable**
in READING and WRITING	as WILLFUL or MIND-WANDERING	as CONDENSED
as ACTUAL or IMAGINED	as CONTAINED or RUMINATIVE	as UNSYMBOLIZED
as SPOKEN or HEARD	as EXPANDED	as UNWORDED
as SPONTANEOUS or ELICITED		
as SELF-CONTROLLED and UNCONTROLLED		
as CONCRETE and/or ABSTRACT		
as MONOLOGIC and *NOT* DIALOGIC		

plied to language. While there can be language without speech, it is undeniable that speech cannot exist without language.

To summarize, the attempt to dissociate the experience of IS from a linguistic modality may be intriguing and aim to describe the indescribable, but it tends to be more confusing than explanatory. If an endeavor to characterize it in greater detail leads to more ambiguities than clarifications, it is preferable to abandon it.

Condensed IS, *unsymbolized* thinking, and *unworded* thinking are better left out of an investigation that is still in search of a clear framework. Similarly, *willful* and *mind-wandering* IS represent distinct and compatible forms, but they lack clear definitions to serve as suitable subjects for investigation.

5 Conclusions: Taking stock of the experiences of IS that are worth beginning with

After reconsidering certain controversial forms of inner speech, or at least those that are characterized in a contentious manner, it is now time to evaluate what remains.

In line with my argument, IS represents the subjective experience of a covert linguistic phenomenon, displaying a range of diverse forms and nuances. However, I maintain that for it to be considered speech, it should maintain some elements of linguistic structure, extending beyond a narrow focus on verbal, auditory, or articulatory aspects. Despite the variations in linguistic expressions that can be consciously experienced in different versions and formats, there appears to be a basic linguistic core. This core may be revealed through thought activities that exhibit a linguistic nature and can elicit a sense of a linguistic experience, even if they are not explicit or accessible to consciousness.

Such a profound linguistic core can be hypothesized to be encoded in various formats, the exploration of which is beyond the scope of this article. However, within the same investigation, there shall be the complementary task of explaining how and why an underlying linguistic structure, which is unconscious and manifested in different formats, transforms into the conscious and familiar linguistic experience of natural language speakers. This experience, which frequently but not always manifests in IS, is an important aspect to consider.

Therefore, as a preliminary step to this ambitious inquiry, it is crucial to develop an understanding of the diverse versions of IS experiences. This comprehension serves as a vital starting point. I believe I have made my contribution to this preliminary step by recognizing the main varieties within IS that align with the subjective experience of language (see *Table 1*). These varieties include imagined and actual forms, experiences of spoken or heard sentences and words, spontaneous or elicited occurrences, willful or mind-wandering instances, experiences characterized by a monologue or a dialogic format (while still rooted in a monologic framework), concrete and abstract manifestations, expanded and condensed expressions (within certain limits).

Despite having excluded certain experiences that other researchers consider as versions of IS, such as unsymbolized thinking, and downplaying others like mind-wandering and condensed IS, I do not intend to argue that these should not be considered worthy subjects of investigation. Rather, I suggest that they are unlikely to be classified as genuine instances of Inner Speech. Although they represent intriguing phenomena for other inquiries in the philosophy of mind, these are *not* the experiences of IS that are worth starting with.

Notes

[1] Cf. JACKENDOFF 2020. Jackendoff, beyond his own work (1987, 1996, 2009, 2012) mentions Noam Chomsky (2002) as a relevant exception. Lobina (LOBINA & ALBÈA 2017; LOBINA 2019) and Magrassi and colleagues (MAGRASSI *et alii* 2015) also have explicitly considered IS. Yet, it seems that the number of linguists attracted by this topic is significantly smaller in comparison with philosophers, psychologists, and neuroscientists.

[2] To mention some relevant works, in addition to the ones in linguistic: CARRUTHERS 1998; MACHERY 2005; CLOWES 2007; JONES 2009; MARTÍNEZ-MANRIQUE & VICENTE 2010; VICENTE & MARTÍNEZ-MANRIQUE 2011; MCCARTHY-JONES & FERNYHOUGH 2011; SCOTTA *et alii* 2013; JORBA & VICENTE 2014; LANGLAND-HASSAN 2014; PERRONE-BERTOLOTTI *et alii* 2014; WILEY 2014; GELFERT 2015; ALDERSON-DAY & FERNYHOUGH 2015; MARTÍNEZ-MANRIQUE & VICENTE 2015; ROESSLER 2016; GREGORY 2017a, 2017b; KNAPPIK 2018; LANGLAND_HASSAN & VICENTE (eds) 2018; LŒVENBRUCK 2018; FERNYHOUGH *et alii* 2019; OLEŚ *et alii* 2020; GERACI *et alii* 2021; BORGHI & FERNYHOUGH 2022; KOMPA 2023.

[3] As correctly noted by one of the anonymous reviewers, I have used "introspection" and "introspective" without explicitly defining these terms. I do not adhere to any specific theory about introspection; rather, I generally refer to first-person reports on which most of the experimental tests rely. Therefore, I imply a fairly low-key interpretation of these notions.

[4] I define aspects as properties that become apparent; therefore, they are relative to an observer, rather than being intrinsic.

[5] In this paper, when I refer to "consciousness", as well as to "conscious experience", I intend to convey a concept that encompasses more than mere "sentience", "what-it-is-likeness", and "phenomenal consciousness". Specifically, I consider an individual to be "conscious of her (inner) speech" when she is aware that she is engaged in linguistic processing, either through speaking or hearing, and is capable of providing a report on this experience. With this understanding, "(inner) speech consciousness" can be viewed as a form of self-

consciousness. Further discussion on this semantic choice will be provided in the following sections.

[6] I am indebted to the significant considerations of an anonymous referee for the reformulation of this point, and I appreciate their relevant objections.

[7] But a hint in a certain direction would not be out of place. For example, if one were to assume a computational theory of language, they could hypothesize that behind both IS and ES, there is the same matrix that can be realized in either format.

[8] The production and perception of words or word sequences in sign language is an interesting variant, perhaps somewhat overlooked by scholars of IS who emphasize auditory experiences over other modalities of linguistic experiences. I am not considering this aspect at the moment as I believe it warrants special contemplation that would require too much space; nevertheless, I find it to be a crucial aspect and I plan to discuss it in another essay.

[9] Rather controversial, indeed.

[10] Thus, meaning by this notion something commonsensical, rather than philosophical, not directly related to *aboutness*.

[11] This is at least what I have gathered from reports of individuals who voluntarily underwent alterations in their consciousness states induced by drugs.

[12] In Vygotsky's meaning, as I explain in a few words.

[13] There are also other reasons, such as the semantic agglutination of words, the prevalence of sense over meaning, etc.

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