Introduction: Inner Voices and Representation of Inner Spaces

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What is this little voice in our head? What is it used for? Why talk to ourselves, silently or out loud? What are the forms and modes of inner language? And what role does it play in our relationship to literature, theater, film? In spite of the abundant studies that have been published these last forty years, mostly in English, most account of inner speech begin with the avowal of a lack of comprehension (see for example, the recent monograph by sociologist Norbert Wiley, 2016). Let us attempt to go beyond such avowal by distinguishing the questions that have polarized research, the disciplinary configurations of this research, and their possible deficiencies (for a fuller state of the art on inner speech, see Bergounioux, 2001, and Smadja, forthcoming). Within the study of inner speech, important zones remain unexplored; one of these is inner space – the mental representation and experience of space – as it has mostly been discussed in an indirect and/or metaphorical manner, when it is discussed at all. This can be surprising, as inner speech appears as a crucial tool for the construction of the imagined spaces that we daily inhabit, when we remember familiar environments, when we project ourselves in the fictional spaces of a novel, when we daydream, or when we plan a trip to an actual place. The current issue of Epistemocritique – A journal of literature and knowledge explores this zone, at the conjunction of inner space and inner speech. To orient ourselves in this exploration, we propose in this introduction a few milestones that have been structuring the field of inner speech studies.

During the second half of the XIXth century, inner speech is the object of a number of reflections, mainly in France but also in other European countries such as Germany. In France, a clear opposition appears between philosopher Victor Egger (1881), and physicians Gilbert Ballet (1886) and Georges Saint-Paul (1892, 1905, 1912), both of whom are followers of Ribot and Charcot. This opposition is not so personal as it is disciplinary and ideological; Eggers defends a philosophical tradition which includes theological, psychological, linguistic and literary aspects, while Ballet and Saint-Paul represent the new medical discourse, proclaiming its scientific nature, and approaching psychology through physiology. That Georges Saint-Paul would coin the term endophasia, a synonym of inner speech, is symptomatic of this new positivist discourse. Beside these scholarly debates, French writer Édouard Dujardin publishes the very first interior monologue (1887), an innovation recognized only in the 1920s. Other arts like poetry, painting, theater and music also participate, at the turn of the XXth century, in this new interest for interiority and its representation (see Jenny 2002).

In the decades that precede the Second World War, the emergence of psychoanalysis, with its central notion of the unconscious, change the way we understand subjectivity and thus inner speech: this evolution is perceptible in the work of Charcot’s disciples, but not in that of Egger. During this period, two psychologists appear, who will push the study of inner language toward that of egocentric speech (the monological discourse of children): the Swiss Jean Piaget, who invents the term, and the Russian
Lev Vygotski, who dies in 1934 (at the young age of 37), before seeing the publication of *Thought and Language*, maybe his most remarkable work, that same year. This monograph will remain unknown in the West until 1962, when it is finally translated in English. This first translation, however, is incomplete, and we have to wait until 1985 for a first integral translation, in French, by Françoise Scève, followed by a new, more complete English version. With this work, Vygotsky revolutionizes the study of endophasia, considering its linguistic forms but also its beneficial functions, mostly neglected until then, except maybe in its literary representations through interior monologue and stream of consciousness.

When Vygotsky’s French translation appear, in the 1980s, structuralism is becoming a thing of the past, and a number of notions such as consciousness and subjectivity are once again attracting the attention of scholars and scientists[1], favoring a renewed interest in inner speech. The new dynamism of neuroscience, starting in the 1970s – but prepared by illustrious ancestors, notably specialists of aphasia and psychologists such as Freud – also contributed to the field’s explosive development during the last decades of the XXth century. This development is equally due to researches made in psychology and philosophy and, quite independently, in literary studies; all the while, linguistics has been slow to consider the topic, except, in France, with the works of linguist Gabriel Bergounioux (2004) and of neuro-linguist Hélène Lœvenbruck (2014, 2016). Also in France, Guillaume, and to a lesser extent, Culioli, have explored the topic, along a few others. In the United States, developmental psychologist Katherine Nelson (1989, 2005) has produced important work from the study of young Emily’s monologues in the crib.

What is the state of this expanding field, today? How do we now think about inner speech? In French, we use a number of slightly diverging phrases to designate it. « Inner language » is the broadest, evoking not only linguistic, but also visual or auditory languages. « Inner discourse » is mostly used by specialists of stylistics or by linguists, and the same holds true for « endophasia, » even though the expression originally comes from medicine. « Inner speech » is a hyponym for « inner language » and designates the verbal component of inner life. In recent years, the functions and contents of inner language have been abundantly analyzed. The components of inner life (speech, images, emotions, sensations) have been studied by Hurlburt and colleagues (2011). Although less studied than that of overt speech, the neuronal functioning of inner speech has become the object of attention these last years. The research program *Inner Speech* (funded by the French National Agency for Research, and directed by Hélène Lœvenbruck at the Neurocognition and Psychology lab at Grenoble University) has generated crucial developments in the domain, synthetically presented in her article in the present issue. Her team has for example helped us distinguish between deliberate inner speech and mental wandering, a form of « meandering thought » central to Christof Diem’s study of Sarah Kane’s play *4.48 Psychosis*. « Endophasic formulae, » to re-use Georges Saint-Paul’s expression (talking to oneself, writing and reading one’s thoughts) have been less frequently studied, and the main lacuna in the domain remains the linguistic forms of inner speech. This is due to the lack of methods for collecting and establishing a corpus, a lack the 2R *Monologuer* protocol presented by Smadja in this issue aims at remediating. Since
2010, Monologuer[2] is the first international research project to account for inner speech through an extensively interdisciplinary framework, using linguistics as a platform to reunite specialists coming from literary studies, neuroscience, philosophy, medicine, musicology, and sociology. Over forty-five researchers are now involved, but also artists and other civil society actors. We are comparing artistic representations and real-life restitutions to examine inner speech under its many guises. Our approach combines fundamental research, research-action (through our collaborations with Doctors of the World, or with hospitals), and research-creation (for the moment essentially focused on dance and theater). A dedicated collection (« Monologuer ») has also been created by Hermann editions, under the direction of Stéphanie Smadja.

While staying true to its literary vocation, the current issue of Epistemocritique reflects the interdisciplinarity of this research program, which is essential if we are to better understand the complex relation between inner speech and inner space. Indeed, if most of the contributions here reunited cross the borders of literary studies (or sit squarely outside it, for example: Lœvenbruck’s neurolinguistic article), they all supply us with methodological or conceptual tools to approach literature, an artistic practice that mobilizes inner speech (that of both reader and writer) with particular strength. By opening its pages to forms of knowledge built through methods little used in literary studies (for example, experimental protocols and fieldwork in the case of Smadja’s and Paulin’s investigation of inner speech in prison environments), this issue of Epistemocritique endows us with precise observations on some of the cognitive and bodily processes through which texts come to life. Resolutely contemporary, epistemocritique here benefits from the most up-to-date researches on inner speech to ask fresh questions to literature, theater or film. Such interrogations prolong a history of literary studies borrowing tools from linguistics, a history on which Smadja, in her contribution « Inner speech: a new protocol, » builds a methodological proposition for the study of this elusive phenomenon.

Psychological studies of inner speech have generally adopted one of two methods: the random beeper (or DES, for « descriptive experience sampling, » described in Hurlburt 2011) or the retrospective questionnaire (Georges Saint-Paul 1892). We could also consider psychoanalytical sessions, when inner speech is exteriorized, as a possible approach, although the presence of the analyst might constitute a disruptive factor. Likewise, the retrospective questionnaires present a major disadvantage, residing precisely in their retrospective character: representation then becomes reconstruction. Is this an inescapable problem? Although inner speech cannot be accessed directly, measurement bias can still be limited, for example through the use of the random beeper. Developed by Hurlburt and colleagues in the 1970s, it is kept by participants at all time, and it rings from six to eight times a day, during three to seven days. When it rings, the participant reports what was passing through her mind. After three to seven days, an interview is conducted in person by the experimenter, to discuss explicitly the inner experience of the participant. This method has two main advantages: firstly, the participant is not influenced a priori by an epistemological framework, as he takes notes before any interview or question by the researchers; secondly, the beeper rings randomly so the participant never knows when she will have to note her inner experience. The transcription remains however slightly retrospective. More of a
problem, maybe, is the relatively small number of occurrences for each experiment and participant, which does not allow the elaboration of general quantitative hypotheses. Such general hypotheses have however been elaborated through the combination of more than thirty years of research by Hurlburt and his team.

In 2014, a new research protocol was elaborated for the Monologuer program (see the monographs by Smadja, and Smadja and Paulin (both forthcoming) for a detailed description of the protocol; see also the related article in the present issue). This protocol has been refined by the research team working on real-life corpora (notably Catherine Paulin, Gabriel Bergounioux, Hélène Lœvenbruck, and Louis Hsiang-I-Lin) and by the participants, whose suggestions have been incorporated as the project evolved. In October 2018, 113 participants had experimented the protocol, a number that allowed the elaboration of qualitative and quantitative hypotheses on the forms and functions of inner speech. Finally, the neurological experiments recently made possible by the development of neuroimaging techniques have opened the way to a new confrontation of results gained by introspective methods and by physiological measurements (see for example Fernyhough and Alderson-Day).

Starting from these various sources of information, we can interrogate the forms taken by specific aspects of inner life and language, such as its relation to inner space. Inner space appears linked to the verbal, but also to the visual and kinesthetic aspects of inner life. The latter, sensorimotor dimension, has mainly been considered through the question of spatial navigation (see for example Epstein 2008, Kravitz et al., or the studies of grid cells and place cells), or of our interactions with the objects that surround us (Filimon et al. 2007). As for the verbal representation of space, it has been analyzed from four main angles: from a semantic angle, within a linguistic perspective (see for example Jeanne-Marie Barbéris 1998, which however deals only with overt expression of spatial representations); from the angle of comprehension, within literary texts or ordinary language (see especially Irrazabal & Burin 2016, but also AbdulSabur et al. 2014, Chow et al. 2013, Ferstl et al. 2007, Speer et al. 2009, Zwaan et al. 1999); from poetical or philosophical angles (Papasogli 2000, Beugnot 2002, Chrétien 2014); and finally in the context of studies on working memory (Logie 1995, Brunye & Taylor 2008, De Beni et al. 2005, Gyselinck et al. 2007).

In this issue, it is through embodied cognition and elements extracted from Lœvenbruck’s researches on inner speech that Pierre-Louis Patoine discusses the reader’s embodied, gendered experience of movement through imagined spaces during her encounter with Hemingway’s The Sun Also Rises and Henry James’ The Aspern Papers. It is also through literature that Béatrice Bloch (discussing the novelistic work of François Bon) and Jean-Michel Caralp (on Kafka) investigate the inner experience of private and public spaces, an experience also explored through on site, real-life investigation (Smadja and Paulin’s work on the inner speech of prisoner). Finally, film (Isabel Jaén on Benito Zambrano) and theater (Christof Diem on Sarah Kane) are examined in their relation to inner life. This issue reflects the interdisciplinary approach integral to the study of inner speech, with contributions coming from neuro-linguistics (Lœvenbruck), linguistics (Smadja and Paulin), literary studies (Bloch), psychoanalysis (Caralp), philosophy and theater studies (Diem), and film studies and
cognitive science (Jaén). The issue begins with linguistics and ends with neurolinguistics, and forms along the way subcategories such as the representation and experience of space in prison (Smadja and Paulin, Bloch, Jaén), the synthesis of recent findings in neuroscience (Lœvenbruck) and their application to embodied literary reading (Patoine) or film viewing (Jaén). Beyond its cognitive dimension, inner speech is explored in relation to specific historical moments such Francoist Spain, which Jaén discusses through the analysis of the film *La voz dormida* and its empathic and political impacts, or postmodernity and its disintegration of the Cartesian subject, at the center of *4.48 Psychosis* analyzed by Diem. Diem’s article allows us to consider inner speech under psychic dysfunction, a situation also touched upon by Lœvenbruck’s discussion of auditory verbal hallucination in schizophrenia, or by Caralp’s discussion of Kafka’s possibly Asperger-like rapport to inner space, an *a posteriori* diagnostic that will surely provoke interesting debates. In the end, many questions remain open: is the mental representation of space based on inner speech or images? How do we pass from one modality to the other? Are public, private and intimate spaces represented differently in inner speech? And what can we learn, from our representation of inner space, of our ways of inhabiting and of sharing our world?

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[1] Let us remember however that structuralism did not completely neglect the question of the subject, a crucial question in, for example, the researches of Emile Benveniste on enunciation, which necessarily imply consideration of the speaker’s subjectivity.

[2] [https://cerilac.univ-paris-diderot.fr/monologuer](https://cerilac.univ-paris-diderot.fr/monologuer)