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Outer vs. Inner Reverberations: Verbal Auditory Imagery and Meaning-Making in Literary Narrative

While phonological recoding may not be necessary
for the comprehension of all print, visually processing print
is regularly associated with auditory and articulatory activity
in readers with hearing.
(Sadovski/Paivio 2001, 123)

Abstract: It is generally acknowledged that verbal auditory imagery, the reader's sense of hearing the words on a page, matters in the silent reading of poetry. Verbal auditory imagery (VAI) in the silent reading of narrative prose, on the other hand, is mostly neglected by literary and other theorists. This is a first attempt to provide a systematic theoretical account of the felt qualities and underlying cognitive mechanics of VAI, based on convergent evidence from the experimental cognitive sciences, psycholinguistic theory, and introspection. More generally, the aim is to isolate a new set of embodied experiences which, along with more widely researched phenomena such as sensorimotor enactment or emotion, contribute to our understanding of literary narrative. The central argument is that distinctions within the domain of embodied VAI also apply to higher-order meaning-making, i. e., that discrete types of VAI are associated with discrete tendencies in spontaneous literary interpretation. Spontaneous literary interpretation stands for any process of meaning-making, however inarticulate, that reaches the reader's consciousness in an uninterrupted course of reading.

Although the necessity of phonological access for the silent processing of print is disputed, the experimental contexts in which VAI has proven to depend on lower-order embodied processes, and/or to have a pronounced effect on silent reading, are countless. But what is it like, in terms of embodiment, to consciously experience VAI? The basic felt quality of all VAI is that the linguistic medium of a written narrative enters the reader's awareness *qua* spoken discourse. This description of VAI, however apt, is not very elaborate. But as we begin to study narrative VAI experiences in greater detail, they soon fall into two distinct types, or more precisely, position themselves between two ends of a continuum. The two ends will be referred to as outer and inner reverberations.

Outer reverberations put the reader in the position of a vicarious listener, feeding on activity in the mind's ear only. Meanwhile, inner reverberations reach

the mind's ear via subvocal rehearsal, i. e., covert articulatory activity in the reader's mouth and throat. While outer reverberations represent text as situated speech and may accommodate perceptual detail of the imaginary voice, inner reverberations rather tend to represent text as raw language, where the only auditory qualities to be explored are those of first-person (subvocal) speech production. Although outer reverberations can feature some kinesthetic qualities such as a sense of resonance in the reader's torso, kinesthetic experience is much more pronounced in inner reverberations, and felt motor activity in the articulatory apparatus is a distinctive trait of inner reverberations alone.

Outer reverberations may effectively be prompted by textual cues such as oral style, speaker familiarity, and situational embedding. By contrast, inner reverberations may be more likely to occur with discourse particularly lacking in such cues. However, the cuing process is subject to many variables pertaining to the text, the individual reader, and the specific reading session. More generally, then, inner reverberations can be said to result from the language of an utterance appearing markedly non-situated. As a consequence, inner reverberations entail a sense of medium opacity, while outer reverberations may rather be associated with a relative sense of medium transparency.

On the level of higher-order meaning-making, outer and inner reverberations link with the presence or absence of spontaneous interpretation, respectively. This is due to a trade-off between one's degree of openness to interpretation on the one hand and one's bodily appropriation of the discourse on the other. The more one is engaged in what X could mean, the less one can possibly be engaged in the saying of X, and vice versa. In analogy to ordinary overt speech: When the voice is mine, the thought is mine as well. It is only when the voice is not mine that one is left to wonder what the underlying thought and meaning is. Other speakers are always ambiguous to some extent, requiring some interpretation. Meanwhile, as the first-hand speaker, one is unambiguous to oneself. Although one may be surprised at the specific course one's speech has taken, one does not reflect, on equal terms with one's interlocutors, on the many coexistent meanings of one's utterance.

Consequently, meaning may be experienced as more dynamic and less firmly tied to wording in outer compared to inner reverberations. The particular words experienced in an outer reverberation are quicker in receding outside awareness, possibly due to the load of concurrent meaning-making. Because of the experiential intensity of such meaning-making relative to the baseline, »literal« meaning-making associated with inner reverberations, the words chosen may seem comparably arbitrary. In inner reverberations, on the other hand, this impression of comparable arbitrariness is less likely. Meaning is felt to be constricted, as it were, to wording proper.

The observations made in this essay are consistent with empirical findings in various fields of psychological inquiry, ranging from reader response and memory studies to experiments investigating willed VAI. For instance, it has been reported that imagined verbal stimuli are more ambiguous when the imaginary voice belongs to an extraneous speaker (in analogy to the proposed notion of outer reverberations), compared to when imagined as voiced by oneself (in analogy to the proposed notion of inner reverberations). In other words, there is experimental evidence that language heard in the mind's ear can be more firmly or more loosely tied to meaning, depending on the imaginer's level of self-implication in its production.

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Introduction

This is an attempt to account systematically for the phenomenon of voice in literary narrative in other than metaphorical sense of the term.¹ It is generally acknowledged that verbal auditory imagery, the reader's sense of hearing the words on a page, matters in the silent reading of poetry (see e. g. Tsur 1992, 1996). Verbal auditory imagery in the silent reading of narrative prose, on the other hand, is largely neglected by literary and other theorists. When it is mentioned at all, approaches seem to diverge widely. Some (e. g., Derrida 1974, 27–73) come close to denying it altogether. Others (e. g., Miall 2006, 173–188) consider its workings only when particular sound patterns and expressions are to be proven special and significant from the viewpoint of global interpretation. One solitary critic (Stewart 1990) turns verbal auditory imagery into a full-blown interpretive strategy, but fails to provide a systematic account of its spontaneous occurrence, its felt qualities or underlying mechanics. Another one (Chapman 1984) accounts for the ways in which verbal auditory and other sound experiences can be encoded by writers in literary texts, but does not detail their effects on readers' mental imagery. This essay aims to fill the gaps. Ultimately, the aim of this essay is to isolate a new set of embodied experiences which, along with previously researched phenomena such as the sensorimotor enactment of narrative events and situations (e. g., Caracciolo 2012; Kuzmičová 2012)

¹ An established term in narratology, »voice« is commonly used as a metaphor for the reader's construal of the ontological status of a narrative utterance (Is it Leopold Bloom speaking? Or is it an impersonal narrator?). (For a review, see e. g. Aczel 1998.)

or the emotional response to text (e. g., Miall 2011), contribute to our understanding and (crucially) enjoyment of literary narrative.

It should be noted from the outset that I do not believe the linguistic medium to be continuously in the spotlight of the reader's attention. Nor do I believe that this medium is attended to most of the time, which may be the case in poetry. On the contrary, I agree with phenomenologist Roman Ingarden, who asserts that readers rather tend to focus on whatever the linguistic medium serves to represent, experiencing the »phonetic stratum« (Ingarden 1973, 12) of language »only peripherally« (ibid., 91). On the other hand, everybody has probably had the subjective experience of hearing the narrative they silently read. I suggest that this experience, albeit comparably subtle and probably scarce in some readers, occurs now and then with each and every narrative we read. This is a view held by many others. For instance, one of the points of criticism traditionally raised against the audiobook as medium is its »denial of the reader's inner voice invoked by the printed page« (Rubery 2011, 11). Similarly to the authors of these criticisms, I believe verbal auditory imagery to be vital to any experience of literary reading worth the name (see also Rosenblatt 1994, 26), although I will not make a case here for that belief. Nonetheless, I do make a case for the idea that distinctions within the domain of verbal auditory imagery also apply to higher-order meaning-making, i. e., that discrete types of verbal auditory imagery may be associated with discrete tendencies in spontaneous literary interpretation.

The essay is structured as follows: After a brief, selective review of psychological literature on verbal auditory imagery (subsection 1.1), I will introduce what I take to be a key phenomenal distinction between the two types of embodied experience produced by such imagery. Representing two ends of one experiential continuum, these two types of verbal auditory imagery will be referred to as outer and inner reverberations. The basic distinction between outer and inner reverberations will be defined as follows: In outer reverberations, verbal auditory imagery is experienced to originate outside the reader's body. In inner reverberations, verbal auditory imagery is experienced to originate inside it. Having described the basic corporeal qualities (subsection 1.2) of these experiences, I will extend the scope of my description so as to include their respective relationships to higher-order meaning-making, or interpretation broadly defined (section 2.). I will argue that outer reverberations agree with interpretation inasmuch as they put the reader in the position of a vicarious listener. Meanwhile, inner reverberations may rather be incompatible with interpretation by virtue of slanting the embodied experience toward active speech production.

Throughout the essay, I will support my argument with references to the experimental cognitive sciences, but I will also introspect on my personal experiences of three rather diverse text samples. The hybrid methodology is due to the

deeply private, experiential nature of my subject matter. The haphazard choice of literary material is due to an attempt to reach back, amongst the reading experiences stored in memory, to what reading was like to me before the idea of this essay was born.

1 Outer vs. Inner Reverberations: Embodied Qualities

1.1 Terminology and Psycho(physio)logical Underpinnings

First a few remarks regarding terminology. For lack of a better term, I will soon (subsection 1.2 and beyond) begin alternating the term verbal auditory imagery (from now on, VAI) with the notion of reverberation(s).² This is not a simple one-to-one trade of terms, long-for-short or scientific-for-aesthetic. Firstly, VAI in this essay stands for the sort of mental auditory representations commonly investigated in psychology and other cognitive sciences as a subpersonal cognitive mechanism, i. e., without specific claims being made on the matter of the subject's consciousness (but with the unspoken assumption that VAI is largely non-conscious). Rather than referring to VAI in this somewhat abstract sense, my term reverberation is designed to capture the aggregate of conscious VAI experiences that can be accessed directly, through introspection.³ Secondly, reverberations are more than just VAI plus consciousness. Unlike VAI in the abstract sense, reverberations as I understand them feature felt embodied qualities as well as felt conceptual qualities. That is to say, there is something it is like to experience reverberations not only in terms of VAI (my quasi-auditory uptake of the strings of letters on a page), but also in terms of what this particular kind of VAI suggests to me in my quest for

² While »reverberation« more often tends to suggest iterative echoing rather than a single and short-lived instance thereof, it will be used here (primarily) in the latter sense. However, this is not to say that reverberations as described below cannot be experienced to recur in the further course of reading. For similarly variable use of the verb »reverberate« in the context of readers' verbal auditory imagery, see Tsur 1996.

³ Although behavioral and neuroimaging evidence will be invoked throughout my descriptions of reverberations, primacy will always be given to their qualities as first-person, experiential phenomena. Thus I will follow cognitive scientists Anthony I. Jack and Andreas Roepstorff, who argue that, »(w)here experiential phenomena are concerned, it is objective measures that must seek validation by establishing their correspondence with introspective measures, and not vice versa.« (Jack/Roepstorff 2003, xiii)

meaning (my thoughts about what these strings of letters may convey). The former qualities will be the main subject of section 1 of the essay, while the latter qualities, as interlinked with the former, will be the main subject of section 2.

Before reverberations are discussed fully, potential skepticism should be addressed from an empirical perspective. For those who may be skeptical about the grounding of reverberations in the reader's body, taking them perhaps to be products of some sort of disembodied inferencing alone, there is abundant empirical evidence that VAI is accompanied by specific patterns of auditory cortical activation (for a review, see e.g. Hubbard 2010). Moreover, VAI is affected by impairments in cortical areas involved in actual speech reception and production (Baddeley/Logie 1992, 183–184). As for the more tangible sites of embodiment, VAI is affected, for instance, when one's tongue and lips are prevented from covert articulation (so called subvocalization). Experiments have been conducted in which subjects were found to perform poorly on a VAI task when chewing on candy, compared to control groups engaged in other concurrent tasks. Interference was also found when subjects had to perform an auditory imagery task while exposed to noise (Reisberg et al. 1989). In another series of experiments, concurrent humming, a bodily activity involving the vocal cords, was found to disable judgment as to whether a mentally imaged consonant was voiced or unvoiced (Smith/Wilson/Reisberg 1995).

For those who may be skeptical about the occurrence of VAI in silent reading specifically or about its effect on reading performance, there is still more evidence to be taken into account. In another experimental setup, subjects' ability to judge whether complex written sentences were meaningful or not decreased significantly when they were unable to rehearse the sentences subvocally due to a concurrent articulatory task (Baddeley/Lewis 1981). More generally, studies have shown that differences in phonetic length (i. e., the time required for pronunciation) between words of identical orthographic length (e. g., »bat« vs. »bad«) affect the time these words take to process in silent reading (Abramson/Goldinger 1997). Prosodic elements such as rhythm, stress, and intonation, although overtly absent from normal text, have also been found to have impact on reading performance. A series of experiments has shown that overt prosodic markers (bold type for sentence stress) enhance children's text comprehension (Beggs/Howarth 1985). In short, the experimental contexts in which VAI has proven to depend (in the case of English speakers) on lower-order embodied processes, and/or to have a pronounced effect on silent reading, are countless.

Whether phonology always plays a role in silent reading or whether semantic content can also be accessed directly from orthography is the subject of debate. Some authors (e. g., Van Orden/Pennington/Stone 1990) have suggested that the phonological route cannot be bypassed, although it surfaces only when compre-

hension becomes especially difficult. However, the prevalent view seems to be that veridical phonology is indeed normally bypassed in silent reading (which is, after all, much faster than reading aloud) *except* in cases when comprehension becomes especially difficult (Smith/Wilson/Reisberg 1995). But the kind of comprehension in question has little to do with the intricacies of literary interpretation. Rather, the above researchers refer to baseline cognitive operations such as the processing of unknown vocabulary, or the disambiguation of homographs (i. e., words of different meaning but identical in spelling) or complex syntax.

Both views, the view that VAI is noticeable only when baseline semantic comprehension is challenged and the view that VAI is not at work at all unless baseline semantic comprehension is challenged, run into problems when checked against the practices of literary reading. It is a fact that literary narratives, at least when contemporary to the reader, tend to pose relatively little difficulty for baseline semantic comprehension as compared to expository text. On the other hand, although we have yet to receive systematic empirical evidence, it is also fair to say that VAI is much more frequently noticeable to the reader of literary rather than non-literary prose.

1.2 Body in Sound vs. Sound in the Body: Outer and Inner Reverberations

What are the basic types of reverberation as it occurs in the reading of literary narrative? What are their essential qualities? These are the central questions of this subsection.

The following are my key assumptions: 1) Reverberation is amenable to conscious experience. 2) The pre-conceptual, embodied component of reverberation consists in conscious VAI. 3) This VAI resembles in one way or another perceiving the words that are being read as if they were pronounced. These three assumptions may have been fairly evident throughout the previous argument. What may have been less evident is my fourth assumption: 4) Reverberations as they will be described below occur spontaneously rather than at will. This last assumption serves to delimit variation, broad as it is in any case, by excluding the many variables introduced whenever readers deliberately use their ability to control their mental imagery (e. g., by purposely imaging a quote from *Hamlet* as if it were pronounced by their elementary school teacher, or by a cartoon character).

As suggested by 3), the basic felt quality of all reverberations is that the linguistic medium of a written narrative enters the reader's awareness *qua* spoken discourse. Although the exponents of poststructuralist philosophy would not agree, this is a perfectly natural experience. In readers with intact hearing, the

first and for a long time only contact with language in life is of the oral kind. Verbal language, we are reminded by phenomenologist Don Ihde, is therefore »normatively embodied in sound and voice« (Ihde 2007, 150; see also Sadoski/Paivio 2001, 118–124). This definition of reverberation, however apt, is not very discriminating. But as we begin to study reverberations in greater detail, they soon fall into two distinct types, or more precisely, position themselves between two ends of a continuum. Consider (my experience of) the following passage:

[I: David]

The breeze from the sea was blowing through the room and he was reading with his shoulders and the small of his back against two pillows and another folded behind his head. He was sleepy after lunch but he felt hollow with waiting for her and he read and waited. Then he heard the door open and she came in and for an instant he did not know her. She stood there with her hands below her breasts on the cashmere sweater and breathing as though she had been running.

»Oh, no,« she said. »No.«

Then she was on the bed pushing her head against him saying, »No. No. Please David. Don't you at all?«

He held her close against his chest and felt it smooth close clipped and coarsely silky and she pushed it hard against him again and again.

»What did you do, Devil?«

(Hemingway 1995, 45; my italics)

In this passage from Ernest Hemingway's novel *The Garden of Eden*, Catherine, the young wife of a writer named David, has just had her hair cut in a wish to become more physically like her husband. Now she is showing off her extravagant haircut to David, for whom all this is unexpected.

Did David's question (»What did you do, Devil?«) reverberate the first time I read it, and how? Just before I go on describing the reverberation I experienced, an important clarification is necessary: It is in no way presupposed that the experience to be described has normative validity with respect to the sentence in question. Obviously, susceptibility to conscious mental imagery, including VAI, varies across readers (see also Chapman 1984, 224) and so do readers' instantaneous moods and inclinations. The sentence may reverberate differently to others, or it may not reverberate at all. The point I will *primarily* be trying to make is rather that if there is a reverberation for others in this case, or any other case, the experience of it can always be placed on a continuum between two extremities. And for this particular sentence, my own experience coincided well enough with one of these extremities. There is, however, a secondary point behind my choice of literary passage. Despite individual differences, I assume that a moderate degree of intersubjective consensus is possible and will therefore suggest, toward the end of this section, that the

intrinsic structure of the above passage may indeed facilitate one particular sort of experience rather than another.

The type of reverberation at work in my experience of the above sentence will from now on be referred to as *outer reverberation*. The embodied qualities of outer reverberations, as exemplified by my experience of the above sentence, can be described as follows: The acoustics of the sentence flowed into my mind with notable ease. It feels as though I heard it pronounced by David, even though David is just a construct of mine based on the preceding narrative. It feels as though I heard it *voiced* by David, even though I have difficulties describing the very voice I heard when I was reading the sentence. The only voice I would be able to describe somewhat reliably is, again, a construct of mine based on the sparse information on David gleaned from the text thus far. In retrospect, my impression is that David's voice is rather deep, sonorous, of an appropriate volume for a self-conscious but considerate middle-aged American (I do not know yet that the character was raised in East Africa). I may even have felt David's voice resonate throughout the upper part of my body, perhaps with an admixture of what may have felt like my own whisper. Nevertheless, my vocal musculature most certainly felt immobile. The reverberation positively originated in David, or in an amalgam of people I have met whom I pre-reflectively imagine David to resemble, even though it was embodied in me.

For what I perceive as a pronounced contrast to outer reverberations, consider now (my experience of) the following passage:

[II: Ruth]

My name is Ruth. I grew up with my younger sister, Lucille, under the care of my grandmother, Mrs. Sylvia Foster, and when she died, of her sisters-in-law, Misses Lily and Nona Foster, and when they fled, of her daughter, Mrs. Sylvia Fischer. Through all these generations of elders we lived in one house, my grandmother's house, built for her by her husband, Edmund Foster, an employee of the railroad, who escaped this world years before I entered it. It was he who put us down in this unlikely place. He had grown up in the Middle West, in a house dug out of ground, with windows just at earth level and just at eye level, *so that from without, the house was a mere mound, no more a human stronghold than a grave, and from within, the perfect horizontality of the world in that place foreshortened the view so severely that the horizon seemed to circumscribe the sod house and nothing more.*

(Robinson 1981, 3; my italics)

The end of the reverberation spectrum to be represented by my spontaneous experience of this latter passage will be referred to as *inner reverberations*. The literary passage is part of the opening paragraph of Marilynne Robinson's novel *Housekeeping* and I experienced it differently from the Hemingway quote in terms of reverberation. (Reverberations may have occurred from the start but I can remember them most distinctly for the highlighted clauses.) This time a slight

resistance was perceptible so that the VAI seemed to lag behind my visual uptake of the words. The flow felt slower on average than that of an outer reverberation. Sheer text quantity cannot be the only cause of this, since the text feels just as slow upon the rereading of a short isolated portion commensurable in length with »What did you do, Devil?«. The main overarching difference, however, lies in the scope of felt embodiment. While the outer reverberation was felt to originate in a vocal apparatus other than my own (that of an imaginary David), this inner reverberation (or series of inner reverberations), as the label may readily suggest, was felt to originate in my own mouth and throat. It felt as though my tongue and vocal cords articulated, enacted the sounds of at least some of the words. Even my lips may have moved slightly on several occasions. This time it was not only the strictly auditory component of the VAI that resembled of my whisper, but also its *kinesthetic* component (i. e., motor activity in my mouth and throat), which was not present, not to my conscious awareness, in the outer reverberation. If there was a voice in this case, it was positively my own and nobody else's. It was me who uttered, or rather subvocally rehearsed, those words in spite of there being a Ruth to do the telling, the telling of her story and the story of her family, to me.

In contrast to the preceding outer reverberation, I would not be able to tell here, no matter what kind of inferencing I use, *how* the sentences in question were pronounced. With David I would be able to report in retrospect the approximate pitch, tonality, or pace of his question, one indicating surprise and perhaps even a mixture of pleasure and fear. And I would have the feeling that this is really what I heard.⁴ With Ruth, who speaks to me through my own body only, I would not be able to report much more than the generic distribution of stress between syllables, and some of the places where I paused for longer than usual and took a breath. The content of such a report would probably largely coincide with that of other readers'. This may seem strange at first, given that inner reverberations are channeled by one's own covert articulation. But in normal overt speech (unless we are professionally trained in vocal performance), we do not access our voice from the outside either. The only way of accessing it in its clear, undistorted form is by listening to a recording, an experience which many people find horrid precisely because it strips away the inner resonance throughout their body (see also Ihde 2007, 136). In inner reverberations, such resonance is key. It cannot possibly be bypassed. In outer reverberations, on the other hand, it can be bypassed quite easily. For instance, I could have read David's »What did you do,

⁴ That perceptual properties such as these can readily be encoded in silent reading, both consciously and on a cognitive level prior to consciousness, has been experimentally validated (see Kurby, Magliano, and Rapp 2009 for a review).

Devil?« without paying attention to the above mentioned resonance in my torso, and still hear David's manly bass.⁵

While the analogy with self-perception in overt speech does not properly explain why one is less aware of diction in inner than in outer reverberation, it reminds us that an experiential dissociation between speech production and speech reception is not really as strange as it may seem. In fact, a similar dissociation has been corroborated for non-conscious, pre-experiential VAI. It has been established that in various tasks involving reading and other forms of language processing, our mind can represent speech production without necessarily representing the auditory output and *vice versa*. Or as psychologists have it, the »inner voice« and »inner ear« subsystems of the so called phonological loop, even though they sometimes operate in partnership, seem to be cleanly separable (Smith/Wilson/Reisberg 1995). Translated into such terms, inner reverberations amount to a first-person awareness of both the inner voice and inner ear, while outer reverberations offer a first-person awareness of the inner ear only. The awareness of voice in outer reverberations is third-person, as if the voice came from the outside.

The above has provided a brief introduction of outer and inner reverberations and their lower-order embodiment. Although it would be naïve to suggest that the two types of VAI can be straightforwardly aligned with two distinct sets of isolated textual cues, the differences between David and Ruth are striking enough to allow some generalization. At first glance, there is a clear contrast between a markedly *oral* (David) and a markedly *written* (Ruth) style. Although neither of the passages is difficult in terms of baseline semantic comprehension, Ruth's narrative is much more syntactically complex than David's question. Because of this complexity, the passage is in particular need of explicit rhythm and parsing, for both of which it depends on the reader's articulatory apparatus. Secondly, one could point out that, unlike Ruth, David has grown to become a *familiar* persona by the time of the utterance in question.⁶ Although we have already been given impressive detail of Ruth's family background, the sort of information which we do not have access to (yet) for David, we know nothing about what she is like as a person, what her occupation is, where she is coming from in any other than literal sense of the expression. A third obvious difference at work between the two passages is best

5 This kind of experience is common in the reading of narratives, personal letters etc. written by people we know well, or stories we have previously seen or heard vocally performed by the author or a professional actor.

6 The etymology of »persona« is sometimes proposed to derive from the Latin *personare*, to sound through.

conceptualized by the classic distinction between so called narratorial *showing* and *telling*. Whereas we know nothing about the circumstances of Ruth's narrative, a fact by which voice and style-of-speech attribution may be made difficult, David's utterance is perfectly framed by its where, when, and why. David's utterance is shown at least as much as it is told. It is delivered in direct discourse, the narrative strategy considered typical of showing (see e. g. Lubbock 1921). That direct discourse is especially well-suited for eliciting outer reverberations is intuitively self-evident, but it has also been corroborated by neuropsychological studies employing neuroimaging and eye-tracking technology. For instance, it has been found that in silent reading, direct discourse yields stronger activations in the temporal voice areas of the auditory cortex, compared to content-equivalent indirect discourse (Yao/Belin/Scheepers 2011).

In short, inner reverberations may be particularly likely to occur with utterances lacking in orality, speaker familiarity and situational embedding. More generally still, inner reverberations may simply result from the language of an utterance appearing markedly *non-situated* to the reader (for whatever reason), as the raw stuff of language rather than speech proper. Consequently, inner reverberations may be said to entail a sense of medium opacity. After all, the more palpably one's own body is active in sheer linguistic mediation, acting itself as a physical medium of sorts, the more palpably one becomes aware of language *qua* medium in the more abstract sense of the word. Conversely, outer reverberations may rather be associated with a relative sense of medium transparency and immediacy. These are of course extremely short-lived, protean and fragile phenomena, subject to the reader's temperament and, crucially, to the unique dynamics of each particular text (and reading session). For instance, David's »What did you do, Devil?« would have lesser or other impact if it were surrounded by direct discourse exclusively (see also subsection 2.2), if it were buried visually in additional text on the same line, and so forth. For any kind of cue to yield an effect, a certain degree of noticeability is necessary, and noticeability tends to decrease with insufficient variation in the text overall. Having said that, experienced readers hopefully recognize not only the general distinction between outer and inner reverberations, but also the possibility (however limited) of tracing outer and inner reverberations to discrete verbal forms.⁷ In the next section I will extend the scope of my descriptions so as to encompass the conceptual dimension of the distinction.

⁷ For a further list of more particular, content-related textual cues potentially productive of outer reverberations (e. g., graphic encoding of lisps and accents; overt narratorial commentary on the manner of characters' speech), see Chapman 1984. Chapman also acknowledges the fact that these cues can become counterproductive when used excessively (*ibid.*, 31, 62).

2 Outer vs. Inner Reverberations: Conceptual Qualities

2.1 Terminology: Meaning-Making, Implication, Interpretation

How are the two types of reverberation related to meaning-making in general and interpretation in particular? That is the key question of this section. But the question itself needs clarification.

Let us begin with what I mean by meaning-making. Meaning-making stands for text comprehension at large, that is, the reader's continuous activity of converting graphic signs into semantic wholes of various kinds. However, the route between a graphic sign, e. g., a printed word, and its meaning is by no means unidirectional. And it is (among other things) precisely VAI, the very basis of reverberation, that comes in between as an intermediary, with the power to reverse directions. Heteronyms are a typical case in point. In isolated words such as »content«, »desert«, or »lead«, meaning remains ambiguous unless (covertly) embodied in sound. But VAI can make a difference even beyond such baseline operations. One and the same sentence or group of sentences can give rise to (outer) reverberations in a number of different intonations, including those barring, or significantly modifying, literal understanding. One could read David's »What did you do, Devil?« as an expression of irony and ostentatious pretense of surprise. One could experience one's VAI and other imagery of the situation in a way strongly suggesting that David could not care less about his wife or her haircut, for instance if David's enunciation sounded clearly overdone (in a way typical for an ironic speaker) or, conversely, if it lacked in prosody (in a way typical for a disinterested speaker). This interpretation may be grounded in the nature of the VAI alone. Alternatively (and perhaps more often), the nature of the VAI may depend on a preconceived interpretation.

Therefore, an important proviso is in place with regard to the notion, spelled out in my introductory question, that reverberation and meaning-making are related to one another. Although I will refer later to various »implications« of reverberation for interpretation, I certainly do not assume a single direction of causality between the two. Rather, I believe them to mutually affect one another, sometimes simultaneously, sometimes taking turns.⁸ Needless to say, meaning-

⁸ For this reason, terms like »concurrencies« or »correlations« would perhaps be less confusing. However, my choice (implications) is motivated by its polysemous nature, wherein both verbs of origin, i. e., »imply« and »implicate«, have a distinct role to play.

making and interpretation do not *have* to combine with reverberations. As previously mentioned, the experience of reverberation may be relatively scarce in some readers. On the other hand, since there cannot be reading without meaning-making, there cannot be reverberations without concurrent meaning-making of one kind or another. That is why I will once again start with the two types of reverberations, only to link them with distinct aspects of meaning-making, rather than proceeding the other way around.

Last but not least, the above proviso calls for a working definition of interpretation. For many literary scholars, the term interpretation denotes a highly specialized intellectual activity, one requiring years of prior academic study. According to this view, interpretation is synonymous with systematic text analysis, which in turn cannot be fully pursued unless a text has been read in its totality. Furthermore, the personality of such a reader-interpreter is allegedly sidestepped to give way to objective insight regarding the text alone. This is not what I mean by interpretation. Firstly, given my focus on reverberations, I am only concerned with what happens in the fluent, uninterrupted course of reading. How post-reading analysis of the scholarly kind may be affected by (distant memories of) reverberations is a matter of too wild a guess. Secondly, given my focus on spontaneous fluent reading, the meaning-making processes involved are assumed to largely outreach analytic, objective knowledge. The kind of meaning at stake is to be understood quite broadly, so as to include any response toward the personal relevance of the story for the individual reader and other forms of »lived« or »experienced« signification (see e. g. Seilman and Larsen 1989; Miall 2006). As empirical research into the effects of pedagogical interventions has shown (Fialho/Zyngier/Miall 2011), this is how the general concept of interpretation may be widely understood amongst first-year (Canadian) university students of literature. When assessing classes where personal response to text was expressly encouraged, they were found to report more focus on »analysis and interpretation«, compared to their assessment of classes encouraging impersonal, analytic commentary only. The systematic downplaying of experience in interpretation, and its strict separation from interpretation, is a professional habit acquired at higher levels of instruction.

As a matter of course, interpretation also comprises any activities performed during reading by readers of advanced literary expertise, provided the reading is uninterrupted. At the other end of the spectrum of complexity, it may comprise operations as basic as the processing of a simple garden path sentence (e. g., »The old man the boat.«). For what is really important in my distinction between meaning-making in general and interpretation in particular is not the complexity of the intellectual process as such. Rather, interpretation is meant here

to stand for any meaning-making brought to a higher-order, conscious level of awareness.⁹ In short, this is the difference: All meaning-making is amenable to backward introspection, in the sense that the reader always (or almost always) has an answer, if asked in retrospect, to the question »What does X (a word, a sentence, a sequence of sentences and so forth) mean?«. Only in interpretation as presently defined, however, is this question palpably present in the very course of processing X. It may not be present literally. The reader may not be thinking the exact words »What does X mean?«. But it is present indirectly, by virtue of reminiscences, associations, and dormant ideas crossing the reader's mind in response to X. If nothing else, it is present as a vague feeling in the reader that X is somehow meaningful, and that a question such as »What does X mean?« may be worth asking in the first place. Furthermore, because baseline comprehension is rarely an issue in literary (as compared to expository) narrative, the sort of meaning thus invoked in interpretation mostly falls beyond the literal, the baseline, the self-evident.

So how are the two types of reverberation related to interpretation? Here is a brief version of my answer: Outer reverberations and interpretation mutually enhance one another. Inner reverberations, on the other hand, imply that interpretation is instantaneously obstructed (and *vice versa*). This is not to say that one cannot interpret, with a certain delay, a stretch of text previously experienced through inner reverberation. If this were the case, too much meaning would be lost in reading, in spite of the constant retrospective/prospective oscillation of the reader's attention (see also Ingarden 1973, 102). My intention is rather to suggest that the two experiences (inner reverberation and interpretation) are unlikely to occur simultaneously. Further elaboration follows in the next subsection.

2.2 Outer vs. Inner Reverberations: Implications for vs. against Interpretation

Even with a loose definition of interpretation such as the above, the two literary quotes hitherto used, i. e., David and Ruth, may perhaps not be considered rich enough examples of interpretation's subtleties. Although both contain symbolically charged expressions (»Devil«; »mound«/»stronghold«/»grave«) for the

⁹ Although the necessary condition of conscious awareness may seem to be suggestive of »reflection« as a more suitable term for this aggregate of experiences, the term would be misleading in this context due to its common association with critical distance, metacognition, and volition (non-spontaneity).

literary scholar to use in a hermeneutic venture, the events and existents they refer to are admittedly quite particular and straightforward, even mundane. Therefore, I will now introduce a third speaker, Eduard Huml:

[III: Eduard]

HUML: (—) At the same time, the moving force of every activity is that which might be described as ambition – in the broadest sense of the word – full stop. Regarding ambition, one must again distinguish between two kinds – dash – I mean colon –

BLANKA: Colon?

HUML: Yes, colon: a healthy ambition and an unhealthy one – full stop. By healthy ambition we understand a really fruitful, profound interest in a definite object – man's natural desire to fulfill himself within the sphere of his interest – full stop. On the other hand, when a desire to use one's resources does not stem from inner motives, but is merely a means towards achieving certain superficial values – such as power, money, publicity etc. – *we talk of unhealthy ambition – full stop.* (Halts, ponders, then turns to BLANKA.) *Listen, Blanka, what do you actually think of me?*

(Havel 1993, 146; my italics)

Let us forget that Eduard Huml, unlike David and Ruth, is a stage play character (the above passage will be treated here as experienced in solitary silent reading), and that he started his literary life not speaking English, but the Czech of Václav Havel's *The Increased Difficulty of Concentration*. The latter is inessential to what I have to convey, the former may be of some tangential interest. This tangential interest concerns the fact that stage plays in general may, in a certain respect (the nearly exclusive use of direct discourse), seem intuitively better fitted for prompting outer reverberations than other genres. This intuition may prove unsupported, however, in yet other respects (one's habituation to direct discourse as a consequence of its ubiquity; the constant visibility of the medium, with its capitalized character names and intrusive stage directions).

In any event, the sentences highlighted above did give rise, for me, to outer reverberations. Reading them for the first time, I could suddenly hear Eduard dictate his theses for transcription in a tired yet confident voice, with two interruptions, two extensive glottal stops: one (naturally) for the stage directions and one (likely due to perceived redundancy) during Eduard's enumeration of »superficial values« – »power, money, publicity etc.«. In order to better illustrate the connection to interpretation, let me introspect a little more on how the experience evolved: I am reading Vera Blackwell's translation of *The Increased Difficulty* as quoted above, a play I am vaguely familiar with from a show performed in Czech many years ago. I know the cultural background fairly well. The conceptual and stylistic precision of the (translated) text are admirable to me, yet my enjoyment of it does not, as yet, go too far beyond such admiration. As far as I can remember, any reverberations experienced over the preceding pages were of the inner sort, even though ideas of

universal human concern, quite similar to the present passage, have previously been spelled out. As a matter of fact, I have had to struggle on one or two occasions to stay on task. Then, as I am reading the first highlighted passage, I become very interested in what is being said. I get a deep sense of relevance, and, in a fraction of a second, a multitude of dormant questions simultaneously arise: Where do I stand between the healthy and the unhealthy?; How common are the healthy in politics?; Is »using one's resources« any different from »being trustworthy in a very small matter« (Luke 19:17), and is it always a good thing? And crucially: Is Eduard meant to be indirectly commenting his own position? What does it take in the storyworld of the play to be healthy? What is Eduard referring to? What does his utterance mean?

Once again, I am not saying that in order to think all this, one necessarily has to experience reverberation. My point is rather that the only possible type of reverberation to be experienced as one is thinking it, is the outer type. Let me reformulate before elaborating. At every moment in the course of reading, the language of a text fluctuates between being felt as *mine*, internal to the reader, and *not mine*, external to the reader (see also Rosenblatt 1994, 53). It always comes from the outside, as it was written down and printed under circumstances over which the reader (typically) exerted no control. At the same time, it is exactly the reader's mind, and nobody else's, what endows it with its emergent meaning, from the most basic to the most advanced semantic levels. Now, in a number of ways, the reader's mind is thoroughly embodied (for an introduction to the general topic of embodied cognition, see e. g. Shapiro 2011), and under some conditions, its embodiment of the type non-conscious VAI becomes conscious *qua* reverberation. Quite naturally, the fluctuation between mine and not mine is then reflected in such embodied experience.

Quite naturally, then, the distinction between mine and not mine cuts along the line between inner (mine) and outer (not mine) reverberations. That is, during inner reverberations, with their palpable activation of the articulatory apparatus, I am arguably more deeply implicated in linguistic production as a (vicarious) speaker than during outer reverberations, which rather put me in the position of a (vicarious) listener. The voice that reaches me in an inner reverberation is mine at best, whereas the voice of an outer reverberation is never mine: It is instead David-ish, Eduard-ish, Hamlet-ish, and so forth.

All assumptions considered, my idea regarding the link between interpretation and outer reverberation (and, conversely, the rupture between inner reverberation and interpretation), is the following: There may be a trade-off between one's degree of openness to interpretation and one's bodily appropriation of the language, in the sense that the more one is engaged in what X could mean, the less one can possibly be engaged in the physical saying of X, and *vice versa*. As soon as I became really interested in what Eduard has to convey, I made myself

comfortable to listen.¹⁰ Prior to that, my sheer reading of *The Increased Difficulty* required more labor, hence the preponderance of inner reverberations. With reference to the title of this subsection: *Outer reverberations implicate the reader qua listener, while inner reverberations implicate the reader qua speaker. But the latter happens at the expense of, that is against, interpretation.* These are the points to be elaborated now.

There may be a very prosaic explanation for this trade-off, most likely with reference to cognitive load and/or attention: For instance, it has been suggested by psychologists that subvocalization (which becomes palpable in inner reverberations only) is present particularly, or even exclusively, when processing becomes difficult. If spontaneous interpretation arises at points of the reader's imminent interest, which is far from implausible (see e. g. Scarinzi 2008), then it is possible to conceive of an inverse relation between interpretation and inner reverberation on the obvious basis that interesting passages are less likely to be perceived as difficult to process. Another way of accounting for such an inverse relation would be one bringing in the variable of attention. That is to say, we could speculate that subvocalization is always present, with more or less constant intensity, but that it is reliably relegated outside awareness as long as the reader is busy engaging in interpretation, as a result of attentional constraints. Also, interpretation resembles speech production in that it yields propositions generated in one's mind and by oneself. This resemblance to speech production makes interpretation likely to interfere with inner reverberations especially. Clearly, these are just a few of many possible suggestions.

Whatever the correct answer, the primary scope of this essay lies not so much in explanations and pre-experiential processes as in phenomenal experience, in the feeling of things rather than their psycho(physio)logical underpinnings. So why should my feeling of actively emulating speech be largely incompatible with actively reflecting over what is being said? To answer this question, let us consider yet another intuition: Inner reverberations bring not only the voice, but also the meaning, the thought lying behind (and emerging from) the expression in question, towards the »mine« end of the mine/not mine continuum. Outer reverberations yield the opposite effect. In analogy to ordinary overt speech, when the voice is mine, then the thought is mine as well. It is only when the voice is not mine that I am left to wonder what the underlying thought and meaning might be.

Other speakers are always ambiguous to some extent, requiring some interpretation. Meanwhile, as the firsthand speaker, the originator of a completed

¹⁰ On the possible connection between outer reverberations and the level of the reader's interest in the text, see also Chapman 1984, 19.

clause or sentence, one is unambiguous to oneself (*pace* psychoanalysis), irrespective of the fact that one may often be quite surprised at the turns one's speech has taken.¹¹ At least this is how it feels. When I have finished a sentence, I may feel inspired by the emergent meaning to continue in ways previously unforeseen, or I may simply want to try and make myself more precise, but I am not really reflecting, on equal terms with my interlocutors, on the many coexistent meanings of what I am saying; I know all too well what they are (or at least that is what my mind is inclined to believe). They are the situation from the midst of which I am speaking. This is why a simple question such as »What do you mean?« can be baffling, and why it can be painful and estranging to hear other people paraphrase, or even repeat verbatim, what one has said or written. This is why it may be natural *not* to interpret an utterance that one has been bodily involved in shaping through inner reverberation, and to perceive an utterance as voiced by another speaker as soon as it triggers interpretation (or *vice versa*.)

Indirect support for this intuition may be gleaned from various sources. In empirical studies of reader response, some indications have been received toward an inverse relation between reader-speaker identification on the one hand and perceived ambiguity of speech content on the other. For instance, Maria Kotovych and collaborators (2011) have found that first-person intradiegetic narrators who are explicit about the motives of their actions (i. e., who build up a transparent speaker personality) are somewhat paradoxically rated by readers as more difficult to identify with, compared to first-person intradiegetic narrators who refrain from revealing their motives. That is, their speech may be more likely perceived as external (not mine) to the reader, and its meaning (at least when it comes to their motives) may be more likely to be viewed as ambiguous, in need of interpretation. But reader-speaker identification is certainly a layered phenomenon, and there is much more to it than inner reverberations. For instance, one could also argue that my outer reverberations of Eduard's dictation made me identify with Eduard's concerns exactly by virtue (rather than in spite) of triggering interpretation, because interpretation is arguably never (not even in the most rigorous literary scholars) entirely decoupled from the private concerns of the individual reader.

Compared to Eduard's above exposition of the concept of unhealthy ambition, his other theses from just a few pages prior (e. g., Havel 1993, 139), which concern the relativity of human values and which I remember spontaneously imaging by inner reverberation, appeared transparent and *stable* as to their meaning. They were felt to mean exactly what they declared (»it would be mistaken to set up a

¹¹ In everyday speech, when we begin a new sentence, we are rarely conscious of its exact structure beforehand.

fixed scale of values, valid for all people and in all circumstances and at all times« and so forth), nothing more and nothing less. That is why there is no real use here in quoting them extensively. At the point of reading, interpretation of these theses did not seem worthwhile to me (but again, my articulatory apparatus was busy mouthing them over). Their felt transparency was unaffected by my (liminal) awareness of the fact that their meaning was necessarily my own guesswork to some degree. Thus I enacted Tolstoy's memento, quoted by Lev Vygotsky, that people who think in isolation can become »attached to their own thought« so tightly that they fail perceiving the plurality of meanings at work in an utterance (Vygotsky 1987, 269). What is true of the interpretive ineptitude of isolated thinkers, may be generally true of literary reception in the fleeting instances of inner (i. e., isolated) reverberation.

This difference between a perceived stability vs. dynamism of meaning in inner vs. outer reverberations, respectively, may be further illuminated with more help from Vygotsky himself and his influential theory of inner speech (henceforth abbreviated as IS in order to avoid confusion with inner reverberation). Vygotsky's IS is not the same as reverberation. Rather, it denotes what is sometimes referred to as verbal thought, i. e., subvocal conceptual thinking that appears, to the thinker, to feature acoustic-linguistic qualities. Vygotsky's main argument with regard to IS is that it is essentially dialogical, a product of the internalization of social (rather than so called egocentric) overt speech. At several points in outlining the phenomenal characteristics of IS, Vygotsky comes close to describing the essence of outer (i. e., dialogical) reverberations as defined against their inner (i. e., non-dialogical) counterpart.

In IS »the word dies away and gives birth to thought«, Vygotsky says in his figurative idiolect, and continues: »(IS) is a dynamic, unstable, fluid phenomenon that appears momentarily between the more clearly formed and stable poles of verbal thinking, that is, between word and thought« (ibid., 280). Elsewhere, he observes that IS appears to be »nearly wordless« (ibid., 274). What would a parallel between IS and outer reverberations tell us? Here is one of many possible suggestions: Compared to inner reverberations (which may be analogously labeled as »nearly thoughtless« insofar as they foreclose interpretation), a reader experiencing outer reverberations may be less focused on wording proper. By virtue of evoking a whole array of possible meanings, the particular words that reach us in outer reverberation, once processed, may be quicker in receding outside awareness (Vygotsky's »dying«) due to the load of concurrent meaning-making. Because of the experiential intensity of such meaning-making relative to the plain, straightforward, »literal« meaning-making associated with inner reverberation, the words chosen may seem compa-

rably insignificant, or even arbitrary. More than the words, situation is what matters. In inner reverberation, on the other hand, this impression of comparable arbitrariness is less likely, because meaning is felt to be more firmly tied, even constricted as it were, to wording proper (in the sense that I felt Eduard's theses about the relativity of human values to mean exactly what they declared, nothing more and nothing less).

Rather than referring to some pre-experiential cognitive substrate, this last conjecture about meaning being more firmly tied to wording was intended primarily as an introspective observation, an account of how it might feel to experience inner reverberations. There are empirical indications from VAI research, however, that such feelings may be traceable to discrete lower-order processes. That is to say, there are real ways in which an auditory mental image can be either more firmly or more loosely tied (prior to introspection) to its meaning. Psychologist Daniel Reisberg and collaborators (1989) conducted a series of experiments in which subjects were instructed, under various conditions, to form various kinds of VAI. The principal research question was whether VAI is analogous to speech perception by virtue of being subject to reinterpretation (e. g., reversal in parsing from »life« to »fly« during fast repetition), or whether it is, similarly to visual mental imagery, inherently unambiguous.¹²

The results obtained from these experiments differed largely across conditions. To the authors' surprise, when subjects were instructed to image a verbal auditory stimulus as if it were pronounced by a friend, reinterpretation rates were higher compared to when the same stimulus was imaged as if it were pronounced in the subject's own voice. In other words, auditory images of one's own speech (corresponding, in my nomenclature, to the inner/mine) were perceived as less ambiguous – more »rigid« as the authors put it (*ibid.*, 638) – than auditory images of another's speech (corresponding, in my nomenclature, to the outer/not mine). Although the general theoretical framework of these experiments diverges from my own, they prove that all VAI types are not equally open to interpretation, and this particular finding is consistent with what has been proposed above about meaning-making in outer vs. inner reverberations.

¹² For experimental studies suggesting the resistance of visual mental imagery to reinterpretation, see the work of Chambers and Reisberg 1985, where subjects are reported to consistently fail reinterpreting the famous duck/rabbit drawing when mentally imaged as opposed to when perceived.

Conclusion

To sum up briefly, this essay proposes a way to describe the experience of verbal auditory imagery in the reading of literary narrative by locating it between the two poles of outer and inner reverberations. Outer reverberations put the reader in the position of a vicarious listener, feeding on activity in the mind's ear alone. Inner reverberations, on the other hand, reach the mind's ear via covert articulatory activity in the reader's mouth and throat. While outer reverberations represent text as situated speech and may accommodate perceptual detail of the imaginary voice, inner reverberations rather represent text as raw language, where the only auditory qualities to be explored are those of subvocal first-person speech production. On the level of higher-order meaning-making, the two types of imagery link with the presence or absence of spontaneous interpretation, respectively.

Some will likely object to portions of my argument, perhaps most notably to my simplistic notion of interpretation. For instance, I have purposely underestimated, for the sake of brevity, the number of intentionality levels that may be simultaneously present in the reader's interpreting mind. As speakers, the characters or narrators of a literary story are not autonomous. They are constructed by an author (and sometimes also mediated by a narrator), and at some level of awareness, the reader always knows this (see also Claassen 2012). At times, the reader may thus have the impression that there is more than one voice to an utterance, more than one diction (say, an Eduard-ish and a Havel-ish one), and that its possible meanings multiply (even diverge) accordingly. Also, what may appear as non-situated discourse at one of these levels of intentionality, giving rise to inner reverberation, may seem perfectly natural as an utterance at the other level. Moreover, one of the distinctive attractions of good storytelling (not to speak of poetry) is that the levels sometimes hardly separate, remaining all simultaneously prominent in the recipient's experience. Throughout the essay, my descriptions of the two discrete types of reverberations obviously fail to account for such subtleties.

Yet other aspects of my hypotheses have had to remain disregarded, such as the question of their strictly intersubjective validity. Due to the essentially temporal and dynamic nature of VAI, an experimental study of reverberations will probably require fairly veridical staging of the fluent reading scenario, with its rhythmical dipping in and out of impressions and experiences. This is of course a great challenge. Any such attempt at empirical validation, or any attempt whatsoever, is very welcome.

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