

# Visual/Verbal Meaning Collaboration in Redefining Interplay.

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## **One Example of a New Conceptual Framework for the Study of Communication Design**

Building a discipline for visual/verbal design has been problematic because the profession thus far rests on assumptions that make verbal elements reducible to visual elements and vice versa. Visual elements are recast as objects that can be “read.” Verbal elements are recast as “background” or spatial “filler” for an otherwise complete design.

These assumptions of reducibility ignore the status of visual and verbal elements as *sui generis*. Because they are “of their own kind,” the interaction of these elements must become a matter of more careful exploration than we have yet considered.

Describing visual/verbal interaction based on reducibility assumptions can appear to handle some visual/verbal interactions. This fact explains both the persistence and popularity of reducibility assumptions in light of their limitations. However, there are many interactions for which these assumptions are inadequate.

What is needed is a framework that can account not only for cases where reducibility approaches seem to apply, but also can handle cases where such approaches fail. To construct an adequate theory, I first collected and analyzed a variety of visual/verbal examples, limiting my analysis to best practices that encourage audiences to both look and read. Using this qualitative approach, I discovered six fundamental kinds of visual/verbal collaboration which I call types of play – a synonym for collaboration. Each type has compositional elements that are particular to its category. Each of these collaborative types is an inventional resource that I found serves specific rhetorical situations.

Using a case study that grew out of that analysis, I will explore one type of play – Redefining Interplay. Redefining Interplay is particularly effective for presenting radically new knowledge persuasively. In my thesis, the radically new is not simply information that is new to a particular group or even complex information that is new to all groups, but new knowledge that contradicts established expert thinking. In presenting radically new knowledge, the theorist seeks to change the field. The audience must abandon preferred and often hard won expert knowledge in order to take in new and less preferred content.

In the liberal arts, we typically address knowledge locks with text or textual enhancement (visual asides that give spatial clarity to text). Arguments using linear text, or even textual enhancement, must be built up over time and pages. Words alone, while persuasive, may not help us see the big picture quickly enough to capture it. We can try to solve this problem by presenting the new idea as a verbal metaphor which makes the radically new idea more vivid and memorable. But in using that method, we employ a textual solution to fill a visual/verbal need.

In situations concerning the radically new, text is of course necessary, but text alone has too many options for interpreting the scenic description metaphors contain. When authors construct scenic descriptions, they must compress that scene and leave out many details. Therefore, they must depend on the audience to be a reliable collaborator, one that can build an accurate scene in their mind’s eye that echoes the author’s intent. But when presenting the radically new, the audience will be an unpredictable collaborator because the context of understanding is not shared. The verbal metaphor, therefore, can morph into many unexpected and unwanted outcomes. I show through this case study, concerning a new theory of textual voice, why visual/verbal metaphor is a superior method of communicating radically new knowledge – one that can limit unwanted interpretations and one that has been ignored for too long.

## **Visual/Verbal Meaning Collaboration in Redefining Interplay:**

A Case Study Aimed at Developing a Conceptual Framework for Analysis and  
Production in Communication Design

### **Abstract**

The study of visual/verbal design has not yet resulted in effective principles of practice and analysis for the designer because our reigning perspectives either recast visual messages as objects to be “read,” reduce textual elements to unexamined “background material,” or remove message interests altogether in order to focus on the “presentation” of ideas separated from the ideas themselves. Given particular goals, these reducibility assumptions can yield reasonable, if incomplete, analyses. This fact explains both the persistence and popularity of these assumptions in light of their limitations. However, these assumptions ignore the status of visual and verbal elements as sui generis – “of their own kind” in significant ways which should make the study of their unique contributions a matter of careful exploration (Author, 2004).

Using that new assumption, I collected and analyzed a variety of visual/verbal examples, limiting my analysis to best practices that encourage audiences to both look and read. From that qualitative approach, I identified and named eight fundamental kinds of visual/verbal collaboration which I call types of play – a synonym for collaboration (Author, 2004).

As the following case study illustrates, that underlying assumption leads to a taxonomy that could be a particularly useful foundation on which to build better tools for the designer. One such tool is a framework for the analysis and production of one type of collaboration – Redefining Interplay. This type is intriguing because it results in visual/verbal metaphors that deal with a particular type of communication problem (Author, 2004). These metaphors build on, but are not the same as, traditional approaches to imagery and text.

Those traditional approaches include both Hugh Petrie (1979) and Thomas Sticht's work on verbal metaphor (1979). Both theorists suggest verbal metaphors provide imagery that characterizes new learning. Petrie touches on visual information, stating it is used "...to supplement in a perceptual way the

new conceptualization suggested by the metaphor” (1993, p. 593). Mark Turner indicates that verbal, spatially based analogies help us understand abstract ideas (1996). George Lakoff and Mark Johnson (1980) have pointed out the importance of verbal metaphor as a way to visually comprehend the world we live in. Finally, a rich literature concerning textual enhancement indicates that texts with supplemental visual information provide learning improvement (Mayer, 2002; Plass et al., 1998; Levin et al., 1987).

While these insights offer important building blocks, Redefining Interplay is not an argument for improved presentations of textual metaphors with redundant visual information to supplement those metaphors. Conversely, it is not an argument for visual metaphors. Instead, Redefining Interplay builds a cross-modal experience in which both modalities contribute to the message as equal partners. If the visual and verbal elements are separated, the message loses necessary information *provided by the modality best equipped to deliver that information* (Author, 2004).

In presenting this case study, it is important to point out the value of any single example pales in comparison to moving toward a fully developed framework for all types of visual/verbal collaboration. For this type of collaboration, the framework consists of four parts: the exigence (bounded by the rhetorical commonplace), the small spatial story that opens an avenue for the exploration of the metaphor, the three-part learning process that affects the development of the metaphor across pages, and certain stylistic concerns that affect the refinement of the presentation.

### **1.0. Redefining Interplay**

Redefining Interplay is a tight cross-modal collaboration whereby visual concepts alter the default definitions of verbal concepts. Interestingly, the visual concept can only perform this task because its many shades of meaning (Solso, 1994) have been constrained by the very words that are being redefined (Author, 2004). For example, Uwe Loesh was particularly successful when he redefined the meanings of the words “history” and “argument” for an academic conference. If the default definition of history concerns what has been preserved, how does the designer redefine that term to include what has been destroyed? Loesh

accomplished that goal by presenting the cover page of the conference program, *History As Argument*, as if it had gone through a paper shredder; thereby showing with immediacy that what should be preserved is easily destroyed.

While “argument” can be defined as a discussion between knowledgeable people of good will, *History As Argument* going through a paper shredder is a new take on that word. Similarly, by itself, a paper shredder can communicate many shades of meaning from the protection of identity to the presentation of bureaucratic procedure. Loesh transforms the shredder from utilitarian to special purposes (Radley, 1990) using the text itself to delineate that special purpose. Loesh communicated history and argument as “radically new knowledge” by making visual and verbal elements sui generis contributors.

Radically new knowledge, as defined here, is not simply information that is new to a particular group or even complex information that is new to all groups, but new knowledge that contradicts established thinking. The audience must abandon assumed or preferred knowledge in order to take in new and sometimes less preferred content. In building these arguments, we typically privilege detailed text. When textual enhancement is used, redundant visual asides merely provide

spatial clarity. But arguments using linear text, even with textual enhancement, must be built up over time and pages. Petrie offers the verbal metaphor as a way of making the radically new idea more vivid and memorable (1979). As Sticht points out, "...just as the tool function of the telescope is to extend the range of the eye, so the tool function of the [verbal] metaphor is to extend the capacity of active memory..." (p. 475). But in using a verbal metaphor, we employ a textually dominant solution to communicate a visual/verbal idea.

In situations concerning the communication of the radically new through metaphor, the text is one necessary element, but one we should sometimes consider separating from its visual counterpart. That separation can be important because spatially descriptive text usually communicates more than one specific scene. As Paul Hopper points out, the computer language that results in "one form – one meaning" is not found in human language. "This is partly because in real-world language a single set of units and constructions must serve a much larger set of functions, owing to memory and parsing limitations" (2002, p. 42). When authors construct scenic descriptions, they not only work with words that must serve a larger set of functions, they compress scenes and leave out many

details (Kaufer and Butler, 2000). Authors need reliable collaborators who can build accurate scenes that echo the author's intent. But the vocabulary at an author's disposal, including a very limited set of descriptors for spatial relationships (Jackendoff and Landau, 1995), turns the audience into an unpredictable collaborator. For that reason, the verbal metaphor can morph into many unexpected or unwanted outcomes. A certain amount of unpredictability can be an asset when the writer wants an audience to relate rich personal experience to a new textual world. But when confronted by a situation where previous experience does not help build new experience, unpredictable collaborators cannot build the appropriate imagery (Author, 2004).

Petrie, in arguing for verbal metaphor, makes "...the epistemic claim that metaphor, *or something like it*, (emphasis mine) renders intelligible the acquisition of new knowledge" (1979, p. 439). I claim the "something like it" Petrie suggests might be found in the visual/verbal metaphor.

It is important to note that visual information alone cannot provide these metaphors either. While Rudolf Arnheim (1969) states we represent knowledge

visually, both Robert Solso (1994) and E. H. Gombrich (1982) point out visual information alone does not often produce messages that can be shared.

Gombrich (1982) sheds light on the problem when he notes that captions help audiences correctly interpret visual information. Visual/verbal collaboration is far more than a caption-based concern. However, Gombrich's point concerning the contribution cross-modal clarity brings to the table should not be minimized because visual/verbal metaphors have the advantage of two modalities working in complementary ways. The linear structure of the text encourages a syntax that can communicate verbal statements, questions and demands (Olson, 1994). The spatial structure of visual information, which leaves all its elements "...simultaneously available for processing..." (Pavio, 1986, p.60) does not encourage syntax. However, visual information is the best way to communicate a particular scene. Words can never fully describe the scene before our eyes. Therefore, when both modalities collaborate, authorial intent that would otherwise stand a good chance of being misinterpreted might be communicated more effectively (Author, 2004).

Certain theoretical constructs formed the backbone of the following exploration.

First, both modalities are assumed to be *sui generis*, contributing to the message in complementary ways. Within that assumption, this framework for production and analysis makes use of Scott Consigny's interpretation of the commonplace (1974), and Mark Turner's hypothesis concerning the small spatial story (1996).

While this study reflects a linear incorporation of those ideas, the actual development was not nearly so clear-cut.

## **2.0. The framework begins with the exigence**

This project began when a colleague, David Kaufer, told me that he had a new hypothesis concerning textual voice. He claimed that textual voice emerges from underlying principles that could and should be taught. This perspective goes against established thinking in American composition which holds voice is the study of individuality and freedom (Harris, 1997). The flexible boundaries of that definition lead to perspectives including: voice is the unique sounds of a particular author, voice is a quality of language play, voice is the echo of speech, and voice is the product of genius. An opposing perspective posits that voice is the conventions of a discipline (Bartholomae, 1985). Interestingly, those flexible

definitions emerge from a text-only metaphor, which I have claimed would encourage these unpredictable outcomes.

Based on my taxonomy for visual/verbal meaning collaboration, Kaufer posited a claim similar to the, “they think it’s ‘x’ but we know it’s ‘y,’” premise I found in examples of Redefining Interplay. “They think voice is either a unique presence or a defined presence, but in Kaufer’s view, textual voice is a quality built from predictable parts that allow a unique presence to emerge.” To that end, he identified and named the predictable parts that forward the new definition of voice.

“They think it’s ‘x’ but we know it’s ‘y,’” is an exigence based on a definitional commonplace (Aristotle, 1991). I use the term commonplace in the way Scott Consigny explains it. A commonplace allows the designer to usefully narrow the direction of the creative process, while simultaneously providing a source of creative inspiration (1974) – in this case, a definitional source. From the vantage point of the commonplace, many possibilities can be considered, but only those options that bring out the exigence of redefinition need be explored.

## **2.2. The framework builds the small spatial story.**

This commonplace sets the stage for the construction of small spatial stories (Turner, 1996). Turner states that the story of human thought lies in our construction of these small spatial stories. Analogies like “shame forced them to confess” bring hard-to-fathom abstract ideas into a concrete three-dimensional world (1996). In *Redefining Interplay*, these spatial stories help the designer decide what aspect of the story should be projected visually or verbally. In this case, the story became, “textual voice is identifiable sources that produce unique sounds.” Sound and source produce imagery while the textual quality of voice as well as the particular value of the source can be described verbally. These qualities will collaborate in a co-dependant way.

This story of source and sound stands in stark contrast to an earlier attempt in which I did not explicitly consider the “spatial” aspect of the story. That first attempt, “textual voice is making sense” left abstract ideas trapped in their abstractions with no way to separate the contributions of one modality from the other.

### **2.3. The framework within the design**

The title alone, *Writing a Voice that can be Heard: lessons in creating human presence on the page* forecasts a textbook genre, but does not begin to forecast a new definition of voice. Had I added, “textual voice is identifiable sources that produce unique sounds,” the text alone could have generated a variety of misleading interpretations. For example, the source could have been interpreted as a group of established authors who inspire emerging writers. Petrie notes the metaphor must guard against this kind of misleading interpretation (1979). I claim visual/verbal collaborative metaphors stand a better chance of guarding against those interpretations, while presenting the three-part learning process Petrie (1979) advocates. That process consists of: the introduction of a paradox, the presentation of the metaphor, activity, and correction.

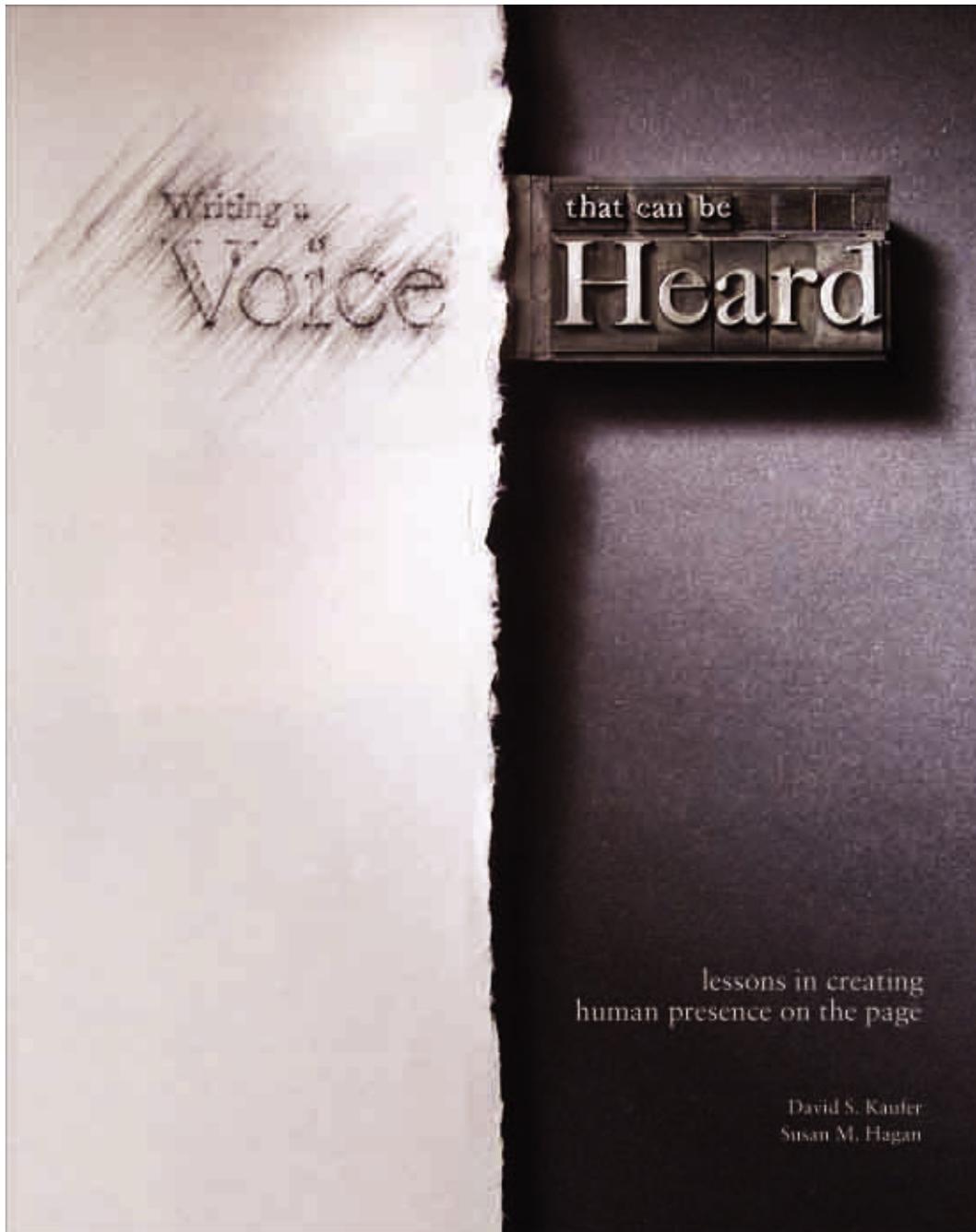
#### **2.3.1. The paradox**

The kind of metaphors that can alter frameworks of understanding, are those that Petrie states in “Metaphor and Learning” (1979) reflect a three-part process.

Petrie states that the acquisition of the radically new begins with the introduction

of an anomaly (Green [1979] refers to it as a paradox). My definitional commonplace presented a paradox of “unique predictability.”

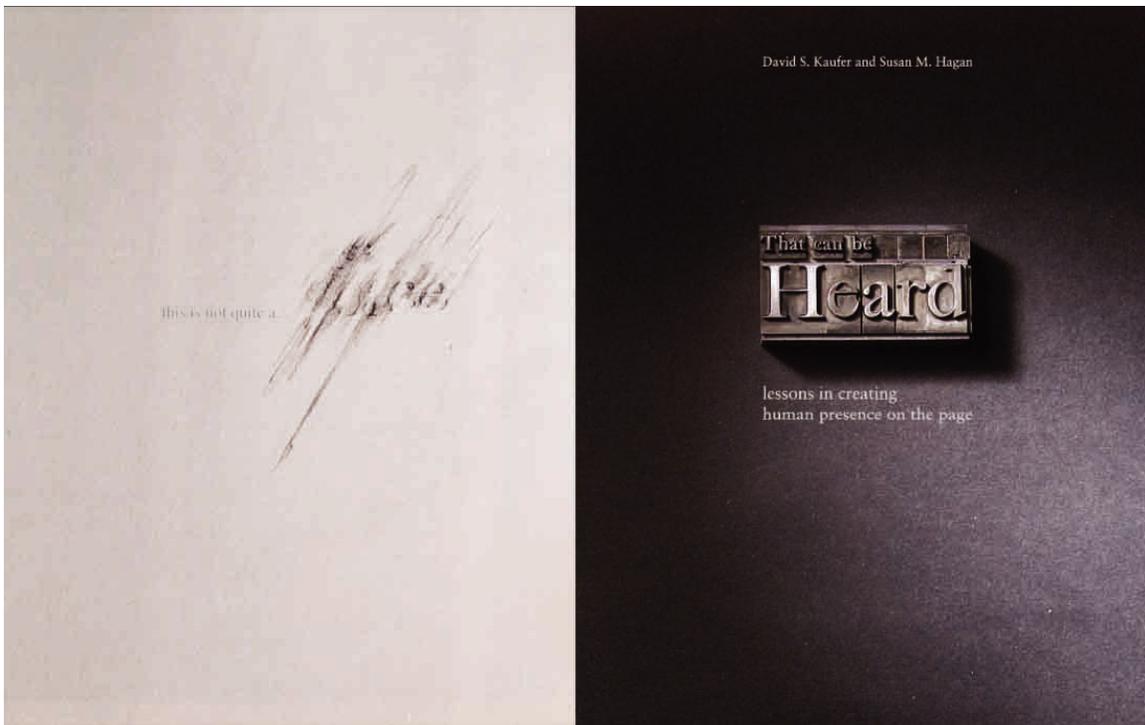
One early attempt at creating that paradox led to a design using an array of typeface examples of the letter “c” meant to convey the problem that arises when unique, but meaningless sounds dominate the definition of voice. I introduced a source to show the audience the importance of turning these meaningless letterforms into meaningful experience. In this example, the letter “c” turned into the letter grade “C-.” That iteration failed mainly because informal user testing showed the letter grade led away from concerns about textual voice and to tangential schemata related to academic failure.



I then created this design in which handset type stands for source, while rubbings on paper overlaid on the type stand for sound. Handset type is an artifact with a history, but one that would be less likely to set off tangential, *deeply felt* personal

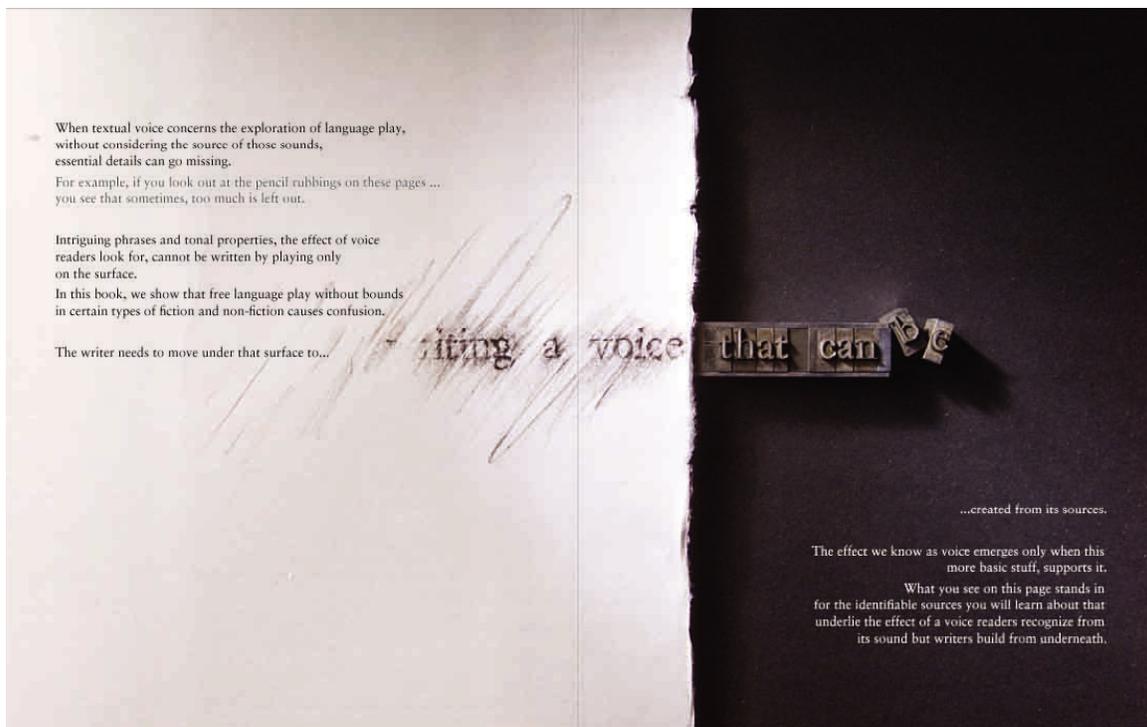
experience. For that reason, the handset type could more easily be transformed from ordinary to special purposes (Radley, 1990).

The cover of this book cannot present enough information to fully introduce the paradox. Even though a unique rubbing represents “writing a voice...” on the left, while the handset type represents “being heard” on the right, the importance of the two different media might not be immediately apparent. Introducing the paradox happens in two stages.



On the left side of this title spread, the text states, “this is not quite a voice...that can be heard.” “Voice” is a rubbing that almost disappears. If the audience hadn’t seen the word before, they might not be able to make it out at all. That alteration, coupled with the cover, introduces the paradox of unique predictability in a voice that both can and cannot quite be heard. The title page does violate genre expectations, but the new descriptive text is needed to focus our understanding (Barthes, 1977).

### 2.3.2. The presentation of the metaphor



On this next two-page spread, the left and right sides present the metaphor. A somewhat unpredictable exploration can be found on the left-hand side. The counterproposal is presented on the right. Allowing some of the word “writing” to go missing on the left, just as most of the word “voice” is missing on the title page, visualizes what can be lost when unpredictable exploration takes over. The text describes the consequences of such a loss. The right side of the page shows a known source presented to help the writer discover the importance of gaining mastery over unpredictable sounds. It uses imagery to narrow the interpretations of the source while verbally describing the value of that source.

The command to, “[I]look out at the rubbing on this page....” Shows a stylistic concern with cohesion by providing the audience with invitations to both look and read. The grayed text then helps the audience find their way back after looking.

The invitation to look out to rubbing and hot type invites non-linguistic understanding of the radically new Petrie states is so important to learning (1979). However, the text is equally important for two reasons. The text contains the ideas that must not only be redefined but also must constrain the unstable

interpretations contained in the visual information. As Yarbus found empirically, words alter what we notice when looking at imagery (1967).

Putting all the text dealing with unpredictable language play on the left side of the spread with the rubbing, while all the text dealing with sources goes on the right with the handset type, is a move made to improve the cohesion between visual and verbal concepts. Maintaining close proximity between visual and verbal elements provides “content collocation” (Author, 2004). M. A. K. Halliday and Ruqaiya Hasan (1976) refer to collocation (the close proximity of one word to another) as a way words create cohesive meaning bonds to other words. In this case, words and visual information had to have strong cohesive bonds to stylistically forward authorial intention.

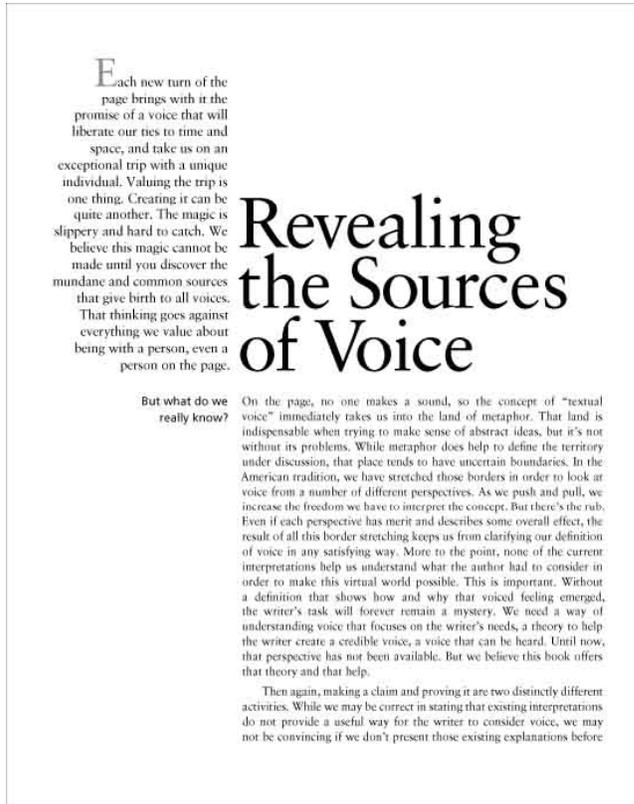
### **3.3.3. Activity and correction**



A focus on activity and correction begins on the above two-page spread. This spread forecasts activities concerning sources rather than sounds.



The table of contents presents the specific activities that will bring further correction concerning the sources of voice. Each chapter emphasizes a different essential source. The correction focuses on the problems encountered when any source is ignored. Without the sources, developing interesting and useful sounds is a hit or miss proposition.



In this page, the chapter begins. The details of the text are framed by the earlier gestalt understanding found in the visual/verbal metaphor. The audience has a tool to extend memory as those details fall into place.

This case study began with a taxonomy bounded by assumptions that helped to inform both that taxonomy and the subsequent development of this framework for the analysis and production of Redefining Interplay. Redefining Interplay is a rich area for the study of invention and composition – one that might limit unintended

audience interpretations, and for that reason, one that has been ignored for too long.

## References

Author. *Visual Verbal Meaning Collaboration: A Framework for the Study of Communication Design*. Diss. Carnegie Mellon University, May 2004.

Aristotle, and George Alexander Kennedy. *On Rhetoric: A Theory of Civic Discourse*. New York: Oxford University Press, 1991.

Arnheim, Rudolf. *Visual Thinking*. Berkeley: University of California Press, 1969.

Barthes, Roland. "Rhetoric of the Image." In *Image, Music, Text*, 32-51. New York: Hill and Wang, 1977.

Bartholomae, David. "Inventing the University." In *When a Writer Can't Write: Studies in Writer's Block and Other Composing-Process Problems*, edited by M. Rose. New York: Guilford, 1985.

Becker, A. L. "A Short Essay on Languaging." In *Research and Reflexivity: Inquiries in Social Construction*, edited by Frederick Steier, ix, 257 p. London; Newbury Park, Calif.: Sage, 1991.

Consigny, Scott. "Rhetoric and Its Situations." *Philosophy and Rhetoric* 7, no. 3 (1974): 175-86.

Gombrich, E. H. "The Visual Image: Its Place in Communication." In *The Image and the Eye: Further Studies in the Psychology of Pictorial Representation*, 320 p. Oxford: Phaidon, 1982.

Green, Thomas F. "Learning without Metaphor." In *Metaphor and Thought*, edited by Andrew Ortony. Cambridge; New York: Cambridge University Press, 1979.

Halliday, M. A. K., and Ruqaiya Hasan. *Cohesion in English*. London: Longman, 1976.

Harris, Joseph. *A Teaching Subject: Composition since 1966*. Upper Saddle River: Prentice Hall, 1997.

Hopper, Paul and Elizabeth Closs Traugott. *Grammaticalization*. Cambridge: Cambridge University Press, 2002.

Kaufer, David S., and Brian S. Butler. *Designing Interactive Worlds with Words: Principles of Writing as Representational Composition*. Mahwah, N.J.: Lawrence Erlbaum Associates, 2000.

Lakoff, George, and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.

Levin, Joel R., Gary J. Anglin, and Russell N. Carney. "On Empirically Validating the Function of Pictures in Prose." In *The Psychology of Illustration*, edited by Dale M. Willows, 51-85. New York: Springer-Verlag, 1987.

Mayer, Richard E. "Using Illustrations to Promote Constructivist Learning from Science Text." In *The Psychology of Science Text Comprehension*, edited by Jose Otero, Jose A. Leon and Arthur C. Graesser, 333-55. Mahwah, New Jersey: Lawrence Erlbaum Associates, 2002.

Paivio, Allan. *Mental Representations: A Dual Coding Approach*, Oxford Psychology Series; No. 9. New York; Oxford [Oxfordshire]: Oxford University Press; Clarendon Press, 1986.

Petrie, Hugh G. "Metaphor and Learning." In *Metaphor and Thought*, edited by Andrew Ortony, 438-61. Cambridge; New York: Cambridge University Press, 1979.

Radley, Alan. "Artefacts, Memory and a Sense of the Past." In *Collective Remembering: Inquiries in Social Construction*, edited by David Middleton and Derek Edwards, 46-59. London; Newbury Park, Calif.: Sage Publications, 1990.

Solso, Robert L. *Cognition and the Visual Arts*, MIT Press/Bradford Books Series in Cognitive Psychology. Cambridge, Mass.: MIT Press, 1994.

Sticht, Thomas G. "Educational Uses of Metaphor." In *Metaphor and Thought*, edited by Andrew Ortony, 474-85. Cambridge; New York: Cambridge University Press, 1979.

Turner, Mark. *The Literary Mind*. New York: Oxford University Press, 1996.

Yarbus, Alfred Lukianovich. *Eye Movements and Vision*. Translated by Basil Haigh. New York: Plenum Press, 1967.