

*Kaisa Suwanto*

## Inspiring Imagery

AN INTRODUCTION TO EVOKING VIVID MENTAL  
IMAGERY IN CREATIVE WRITING

The power of mental images is revealed when a reader sees a film adaptation of his favorite novel. No, he might cry, the protagonist doesn't look like that. Some texts inspire so vivid imaginary that we pay attention to it, and some create imaginary that is so vague it runs by the reading experience almost unnoticed.

In this article I'll examine the role of mental images in creative writing. I'll try to answer the two following questions: do readers' styles of imagining differ, and how can writer evoke vivid mental images in the reader's mind? I will not go into the writer's cognition; that I'll leave to a later occasion. Instead, I'll focus on the reader's mind and explore the mind's means that can be used to inspire visualization.

First, I'll take a look at imagery and summarize its main aspects. Then, I'll study the ways in which images are related to verbal art and reading literature. I'll examine the different cognitive styles and suggest reasons why imagery is important in creative writing. To conclude, I'll use the former insights and leaning on Elaine Scarry's arguments,

see if there are some ways we can inspire imaginary in creative writing.

#### WHAT ARE MENTAL IMAGES?

Remember your favorite childhood song? How does your father or best friend look like? We use mental images to remember, think and dream. Images vary in vividness and handleability and from person to person. Some images are stronger and easier to picture and modify than others, and some people experience more mental images than others.

Cognitively speaking, visual mental images are perceptions without external visual stimuli. Rademaker and Pearson (2012) define mental imagery as “the retrieval of perceptual information from memory, and the subsequent examination of this information in the ‘mind’s eye.’” When we perceive, our mind creates internal representations of the perceived object. These representations are reactivated in imagining. Kosslyn (1980) compares mental images to images on a computer screen: mental images are created from information in long-term memory in the same way that computer generated images are constructed from data that is saved in files. Kosslyn calls mental images quasi-pictorial representations or surface representations, and the “screen”, on which the images are displayed, visual buffer. Images may include more information than can be maintained, because the visual buffer fatigues. (Kosslyn 1980, 89, 91, 286.) Images can also be manipulated and transformed. The moldability of mental images is an important aspect of cognition as it enables visual imagery to be used

as a tool to create new information. (Ganis 2013, 2–3.)

Experiencing mental images is usually depicted as seeing with mind's eye, hearing with mind's ear etc. The expression "inner sense" embodies well the tight connection between mental images and senses: there is considerable overlap between the imaged and actual perception. Perceiving and imagining activate the same areas of brain and in similar patterns (see for example Zatorre & Halpern 2005; Kreiman & Koch & Fried 2000; Djordjevic et al. 2005). Supposedly because sight is such an important sense to us, visual mental imagery are most widely studied category of mental images.

Images are multisensory in nature. They can take place in all modalities and usually use many inner senses at the same time. For example, auditory images may include visual information (seeing someone speaking) or motor imagery (movements of playing an instrument). Also, imagery uses semantic information (meaning of words or sounds) that is gathered through many senses. Imagery of touch is a good example of the multisensory nature of mental imagery: it uses imagery of texture, temperature, movement and sight. The imagery of taste may be multisensory at heart, because as the percept of taste is a mixture of taste, odor, texture, and trigeminal input, the imagery of taste combines more than taste modality. Also, it is likely that we imagine the food, not the taste. (Bensafi & al. 2013, 4–5.)

Charles Spence and Ofelia Deroy (2013, 159–162) separate cross-modal imagery from multisensory imagery. Cross-modal refers to "imagery in which the stimulation of, or experience in, one sensory modality influences the processing of stimuli presented in a different modality".

Seen this way, literature (and art all together) is profoundly cross-modal: the act of reading (seeing) create images that use also other modalities in addition to visual.

As cross-modal imagery is depicted by other inner senses than the original perceptual input (as, for example, imagery of sound when watching silent lip-talk), one starts to wonder how it differs from synesthesia. Synesthesia is a phenomenon where a percept is simultaneously experienced with imagery that uses another modality than the actual percept. Spence and Deroy argue that cross-modal imagery differs from synesthesia in that the latter is involuntary and idiosyncratic. Synesthetic image elicited by a certain concurrent is systematically the same. For example the letter A is always seen as red or note G as yellow. Moreover, synesthetic person doesn't have control over the vividness of the image and lacks the ability to transform the concurrent.

Spence and Deroy raise a question of the multisensory nature of consciousness on the whole. Can consciousness be simultaneously aware of images in different modalities, or, does awareness execute rapid changes from one modality to another so that the overall experience is multisensory? (Spence & Deroy 2013, 6–8.) Though the question is intriguing, as long as mental images are experienced, it doesn't matter in creative writing whether mental images are recognized simultaneously or sequentially. That is, unless multisensory imagery causes more pleasure and is more vivid than unisensory images that are experienced rapidly one after another, and there are textual ways of creating and differentiating both.

Though imagery uses the same neural networks in brain as perception, mental images are weaker than perceptions.

One possible explanation for that is a feedback signals that are generated during visual perception are weaker than the signals generated during perception. This may be a way for cognition to separate imagery and actual perception from each other. (Ganis 2013, 23.)

#### WHAT IS SO SPECIAL WITH MENTAL IMAGERY AND LITERATURE?

Mental images and verbal arts have a special connection. Literature can be depicted as the art of mental images. Gabrielle Starr (2013, 69–70) formulates: “[...] literature subordinates actual perception, marks on a page, to imagined perception, what those marks can evoke.” Reading literature creates images in the readers mind in two ways: a reader may experience mental picture that the text inspires, but also reading silently includes mental imagery – the imagined sounds of words and the motor imagery of forming them (Starr 2013, 89). There are some literary genres where the actual perceptual stimuli, the concrete or real life object, has a major role, like visual poetry or sound poetry. Visual poetry converges with visual arts, and sound poetry with music: the things seen and heard are in chief role. Radio drama is an interesting genre that lies between the internal and external stimuli: it uses music and semantic sounds (spoken words and sound effects), but nevertheless imagery is in crucial role in “seeing” what is heard.

Elaine Scarry underlines the special role of literature in enhancing the vividness of imagery. She argues that literature gives directions and commands to create mental imag-

es. For example, a sentence like “the boy’s hand was full of scratches”, is understood by mind as: “[Now look closely at the boy’s hand.] The hand was full of scratches.” (Scarry 2001, 35–38.) As former mentioned, one neurocognitive hypothesis for the frailty of mental images compared to actual perception is the weak feedback signals in the brain. Further neuropsychological investigations of the differences between literature inspired mental images and everyday mental images is needed: do mental images that are “created under constructions” excite stronger feedback signals?

Imagery is one of the main reasons for reading. People enjoy the images literature evokes and savor the language and expressions. The cognitive style of processing information affects the way a reader savors the reading experience and sees imagery, if he sees anything at all.

Cognitive styles were divided into verbal and visual until in 1980’s neuroscientists found out that higher level visual areas of the brain have two functionally and anatomically distinct pathways. Information is processed in two parallel processes: the spatial relations or dorsal pathway and object or ventral pathway. Dorsal pathway analyzes distances, dimensions, spatial relations, directions and speeds. Ventral pathway processes pictorial appearances: colors, textures, patterns, sizes, shapes and brightness and examines information in a more holistic way. This affects on the tendencies people have on perceptual processing visual information: visual cognitive styles divides into spatial or pictorial style, depending on which stream, dorsal or ventral, they rely on. Perceptual processing styles pertain to visual mental imagery and working memory, and seem to answer the question why some people excel in spatial and

some people in object skills. (Kozhevnikov & Blazhenkova 2013, 300–301; Otis 2015, 508.) Object visualizers create “high-resolution images of the visual properties of individual objects and scenes” as spatial imaginers use “imagery to schematically represent spatial relations among objects, perform spatial transformations”. The tendency to object or spatial imagery is seen in neural activity. The use of neural resources is more efficient during a task of one’s tendency and that leads to lesser neural activity in task-relevant regions. (Kozhevnikov & Blazhenkova 2013, 301–303.)

Therefore, cognitive styles are not twofold but threefold. Laura Otis (2015, 508–509) summarizes:

Rather than a linear spectrum from “visual” to “verbal”, human cognitive styles might be imagined as occupying a three-dimensional space ruled by spatial, “object” (pictorial), and verbal axes. An individual’s cognitive habits might be represented as a mobile point, which drifts through a sector of this space defined by spatial, object, and verbal coordinates.

What if a verbally inclined writer or reader would want to, alluding to the title of Scarry’s work, enhance her “dreaming by the book”? Cognitive styles are not strict categories; they are flexible, especially in childhood, and vary between individuals and tasks at hand. People rarely excel at both pictorial and spatial thinking, but interestingly, people who fall into verbal group have often average spatial or object abilities, or both. This indicates that book lovers may savor the language *and* enjoy the diverse visual images it inspires. Otis notes that by thinking themselves as namely verbal, people may unwittingly narrow their cognitive style. In addition, Otis points out that also verbal

cognitive style might be more diverse than thought. (Otis 2015, 508–509)

If cognitive styles are flexible, can imagery be enhanced by training? Rademaker and Pearson (2012) found out the contrary. As visual perception and visual perception are closely linked and perception can be improved by practicing, Rademaker and Pearson wanted to find out if it is the case with imagery. The result of the study showed that training didn't improve visualization. However, the participants' meta-cognitive skills were increased.

#### WHY DO WE NEED MENTAL IMAGERY IN CREATIVE WRITING?

Not all readers value visual mental imagery, and then again for some it is one of the main reason for reading (Otis 2015, 513–515). Scarry argues that seeing mental images must be intrinsically pleasurable and rewarding to us, because forming and maintaining mental images is laborious to the mind. But cognitively speaking, do mental images give pleasure?

It seems that creating mental images don't give pleasure, but evoking former vivid images does. (Leboe & Ansons 2006). Scarry argues that former images are easier to recreate than new ones. Thus, reading a novel again enhances pleasure of the reading experience: as vivid images are recalled, they appear more effortlessly and pleurably. One might hypothesize that reading a novel or a film script for a first time gives pleasure to the reader as well, because the same images of the protagonist or the milieus might be

used and altered repeatedly during the text.

In addition, it seems that language that inspires imagery enhances the expressiveness of the text and the reader's experience even though the reader doesn't see nor value vivid imagery. Expressive, imagistic language is effective regardless of the reader's ability to experience mental images. Vianna et al. (2009) studied the correlation between emotional imagery and physiological states trying to test if vivid mental imagery would relate to activation in gastrointestinal and sympathetic nervous system. Interestingly, the results were opposite: somatic responses were reduced with vivid imagery and enhanced when the participant didn't see vivid images. Referencing to Vianna et al., Starr (2013, 93) concludes, that imagistic language affects a person even if she isn't inclined to see vivid imagery: people who don't see clear mental images feel the imagistic language emotionally in the body.

Also, imagery may serve as an important role in aesthetic experience. As the objects and reasons why something is found aesthetic are highly individual, temporal and cultural, the mechanism of aesthetic experience must be found on other aspects that are common to all: emotion and reward (Starr 2013, 35). Emotion and reward are central to imagery. Starr argues that imagery unites sensory information, emotional experience and semantic data and is similar to the way "powerful aesthetic experience integrates information and sensation to redefine and revalue what we feel and know" (Starr 2013, 92).

Following Starr, vivid imagery is crucial to a powerful reading experience. Imagery shares by large the same network and systems with default mode network. Default

mode network is a network of interacting brain areas, and it's mostly known for being active when the brain is processing emotions and prior experiences or when a person is doing self-referential mental activity (Raichle 2015, 433–434, 436, 440). Default mode network has turned out to be in major role in aesthetic experience. Vessel, Starr and Rubin found out in their experiment that when students were asked to evaluate paintings the activation decreased as in any other task. But, when the students encountered a work of art that moved them, the default mode network lighted up. (Starr 2013, 45, 58–59.) Starr suggests that “intensely felt imagery (primarily multisensory imagery and imagery of motion) is one of the links that unites both the arts and our most intense experience of them” (Starr 2013, 24–25). Writing text that inspires vivid mental imagery not only enables pleasurable reading and somatic experience but also shows way to aesthetic experience.

#### MIND'S TECHNIQUES: INSPIRING VIVID MENTAL IMAGES IN CREATIVE WRITING

“Use your senses” is one of the basic creative writing tips. The tip is acute, as description that delights reader's senses pulls the reader efficiently into the literary world. But even more importantly, one might argue that vivid sensory descriptions capture the reader's body and mind, because perceptions and imagery use similar pathways in the brain. Imagery is feeble compared to perception, but Scarry argues that what makes literature special, is the way it enhances the vivacity of imagery: being told to compose

images enhances them. So, what kind of instructions work best? How can a writer enhance the vividness of the text's imagery?

Scarry reflects the ways to inspire imagery in her *Dreaming by the book*. Her study is introspective and refreshingly open-minded as she analyses excerpts from classics to show the reader how vivid imaginary is inspired. Scarry's work seems acute in surprising ways, and is mentioned in many cognitive literary studies' articles (see for example Otis 2015 and Starr 2015).

Scarry's thesis summarized is that imaginary is enhanced under instructions that are inherent in literature. Instructions enhance imagery, but there are also some aspects that can create more vivacity. First, all objects that are rare or transparent, as immaterial as imagination itself, are easier to imagine. When added to an image, they make everything else easier to picture too. A shadow that passes on the wall makes the wall almost palpable, and radiant ignition makes us see more clearly the object that is shining and enhances the image of movement. Also, tissue-like fabric has this same effect: a cloth next to almost any object makes the object easier to picture, and the brittleness of flowers make any mental image bloom. Surprisingly, the reader is not aware of the role of rare substances and doesn't notice their use – nor necessarily the skilled writer.

Some senses are easier to imagine per se. Tactile imagery is usually vivid, and Scarry notes that the size of the area in the brain devoted to sensations in hand is larger than the area devoted to other body parts, though lips and feet have large regions also (Scarry 2001, 46–47). Not surprisingly, hand and tactile imaginary are easily and often im-

agined. Also, hands are also important element in getting the visual mental images move. Scarry argues that images that move and have “an odd presence of hands or handlike events” are easily imagined (Scarry 2001, 112).

As movement means liveliness, moving pictures are essential to a writer. An object in a mental picture may seem move, but Scarry argues that the movement happens to the whole picture: adding or subtraction an element, or stretching, folding and tilting the images create an illusion of movement of its parts. Moreover, movement is at the heart of many mental representations (Starr 2013, 78–81). Starr argues that imagery is important in aesthetic experience because of its integrative potential, and motor imagery is especially integrative. It combines sensory information and is central to imagery of many modalities (Starr 2013, 91). Also, movement seems to be intrinsic in imagining. Images ignite and fade away and are moved across the visual buffer to be scanned and zoomed (Kosslyn 1980, 285).

Olfactory and gustatory imagery are generally more difficult to both describe and imagine than other modality images. They also differ from other senses in that they are chemical senses. Starr (2013, 78) notes that it is questioned if olfactory images are primarily perceptual or sematic. People use a variety of strategies to depict olfactory images, as associations and categories (Starr 2013, 78). Depicting a scent with nouns, metaphors and analogs is common in creative writing. For example: “It smelled sweet as wild strawberries.” Starr notes that motion can be used to make imagining smell easier: the movement of blending one consciousness into other in a semantic-sensory metaphor

may ease the imagining of a scent (Starr 2013, 78).

Following Scarry it seems that imagery is enhanced mainly by using the ways the mind and imagery work: adding objects of image-like, rare substances and using the motion of mind both in creating and modifying visual imagery, and associating perceptual imagery from a modality to other modality or a semantic content. That raises an intriguing question: can a writer use his mind introspectively? If we observe our own mental images, does it lead into text that inspires vivid imagery? Scarry points to that direction, but further research is needed.

*KAISA SUVANTO is a Creative Writing university teacher and doctoral student in Jyväskylä University. Her thesis addresses the ways imaginary and language can be used in screenwriting and pays regard to embodied cognition. She is a goal-oriented amateur screenwriter, and also a blogger and columnist in Minä Olen magazine, where she writes about mind-body connection and intuitive life.*

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