

Communicating Symbolically: The Significance of Doodling between Symbolic Interaction and Psychoanalytical Perspectives

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Communicating one's feelings and state of mind is a core element of human interaction (Wilkinson, 2011). In many cultures, pictures and shapes have been used as symbols to express thoughts and emotions, and it is said that a picture is worth a thousand words. Egyptian hieroglyphics and pictograms found in prehistoric caves exemplify man's use of symbols to communicate a legacy to other cultures. Doodling is a contemporary form of pictogram communication. Freud and Jung were the first to consider the significance of doodling from a psychoanalytical perspective, and scholars have since built on their foundation. Even so, the effects of doodling on human interaction have never been addressed. This article examines the effect of doodling on human communication and the tendency of people to generate doodles according to interactive situations. While drawing on the previous literature in psychology and graphology, this article will approach doodling and doodles from a new angle. Using symbolic interactionism as a theoretical framework, this article will provide a critical analysis of prior psychoanalytical interpretations of the phenomena of doodling.

What is Doodling?

Some definitions describe doodling as a foolish or wasteful action. However, some circles of psychology take doodling more seriously. According to Rabach (1972), doodles are aimless designs—drawings and scribbles absent-mindedly rendered while our thoughts drift elsewhere. Watts (2000) defined doodles as pictures of self-expression that are usually produced in a semi-automatic manner while the mind is in a preoccupied or trance-like state of consciousness. Most scholars believe that people are unconscious, preoccupied, or absent-minded when doodling.

Why Do People Doodle?

Humans doodle for diverse reasons. They doodle to express emotion or state of mind, to cope with boredom or frustration, or to reflect a view of their identity to others. Doodling allows the unconscious mind to communicate in symbolic expressions; these can have universal as well as personal meanings. When one is stuck on an answer to a problem or looking for a creative idea, doodling will often release the hidden symbolic abilities of the unconscious mind (Watts, 2005). Interestingly, Polish mathematician Stanislaw Ulam discovered his graphic representation of prime numbers now known as the Ulam Spiral while doodling at an academic conference.

Doodling can also help maintain emotional balance when one is bored, frustrated, or preoccupied. People often tend to doodle when they are stuck in a place where they do not want to be. For instance, if people are in a boring meeting and have other priorities or prefer to be someplace else, they are likely to doodle. Similar to daydreaming, doodling helps people turn their thoughts to something more pleasurable.

Another feature of doodling is that it usually happens when open expression is not possible. Thus, if one is in a situation where free verbal self-expression is prohibited, doodling may compensate for their inability to speak their mind. The drawings may contain unconscious, subconscious, or conscious messages. Petrovsky (2009) agreed that people sometimes use visual symbols to replace speech as indirect forms of conscious expression.

Furthermore, doodles can reflect more than one's emotions and states of mind (Torrey, 1989). Doodles might also reflect an individual's identity, religion, and values. The use of symbols to communicate who we are and how we see ourselves is not new. As an illustration, people sometimes choose to tattoo themselves. In doing so they place visible images on their bodies to give others an impression of their personal myth (Armstrong, Owen, Roberts, & Koch, 2004). According to Firmin, Tse, Foster, and Angelini (2008), getting a tattoo to express religious commitment was a consistent theme among students in their study. One might argue that getting a tattoo differs from doodling because people are fully conscious when they decide to draw a certain symbol on their body. Granting that, Firmin et al. (2008) concluded that groups would often spontaneously choose to tattoo themselves when together as a result of socializing in certain community situations. People tattoo themselves to identify with a group or illustrate a teen-like rebelliousness. Historically, tattooing has been associated with gangs. However, tattooing is widely used nowadays by military personnel, teenagers, women, and anyone wishing to communicate a

message of identity to others (Fisher, 2002). Tattooing and doodling both include pictured symbols that are produced to express oneself to friends, family, and the society at large.

The Significance of Doodling

Although they do not always realize it, most people doodle. Often, when caught in the act of doodling, they are embarrassed. Surprisingly, their supposed “nonsense scribbles” left behind on notepads, paper margins, desktops, and anywhere else a pen could leave a trace may have a meaning. While some believe that doodles are just senseless scribbles, others believe that doodles reveal a lot about one’s personality, inner world, and communicative style. Doodlers claim that doodling helps them to concentrate more when listening to others. However, many non-doodlers feel that such a behavior is disrespectful to the speaker, as doodling permits doodlers to avoid eye contact and makes them appear to be in “their own world.”

What is the truth about doodling? Do doodles really offer insights into individuals’ psychological states, or are doodles merely a waste of paper? The following section will explore in depth the significance of doodling from multiple perspectives. This part of the discussion will address the relations between doodling and graphology, psychology, and symbolic interactionism.

Doodling and Graphology

Graphology, which is handwriting analysis, and doodling share some common elements. Graphology principles offer useful illumination in interpreting doodles (Watts, 2005). Not only can the shape of the doodle act as an indicator, but the page layout, movement, angles, structure of the stroke, and speed can each reveal aspects of the doodler. For instance, if the doodler presses heavily on the paper, this could indicate energy, activity, and possible aggression. In contrast to this, a sensitive person would probably doodle with lighter pressure. Use of light pressure can indicate a gentle and optimistic person (Nelson, 1992). Balanced and stable personalities usually express themselves through medium-pressure doodles. As researchers Vinter, Lange, and Kuttner (2008) have explained, the ability to interpret drawings and doodles requires considerable intelligence.

The positioning of the doodle on a piece of paper has significance as well. A doodle drawn at the top of the page may indicate that the doodler is a daydreamer, imaginative, and optimistic. A productive and materialistic person who seeks accomplishment tends to doodle at the bottom of the page, whereas

someone who centers his/her doodles at the middle of the page is often a careful, clear thinker with a poised social presence. A shy, introverted, and socially reserved person is likely to doodle on the left-hand side of the page. An extroverted and energetic personality usually doodles on the right-hand side of the page. That person is often ambitious about planning for the future (Watts, 2005). One major difference between graphology and doodling is that handwriting is taught, while doodles are spontaneous designs.

Doodling and Psychology

Psychologists and experts are still researching the interrelationship of doodling and psychology. Dr. Robert Burns, a psychologist and former director of the Institute for Human Development at the University of Seattle, has focused on the significance of doodling throughout his career. He has also researched doodles as a possible means to diagnose the emotional problems of clinical patients. Burns, along with clinicians and researchers in the field of behavioral art therapy, has suggested that the shapes and symbols we draw indicate much about our state of mind (Juan, 2006). Schott, a neuroscientist, has theorized that doodling might reveal some valuable insights about the functions of the brain. She is an advocate of further research on doodling as studies are limited (Schott, 2011).

Burns has stated, "even the most innocent doodle may carry messages from the unconscious" (Juan, 2006). Dr. Betty Edwards, an Art professor at California State University, Long Beach, shares a similar perspective. She has suggested that doodles imply a lot since they allow material to come pouring out uncensored. This occurs as a result of left brain function which dismisses certain tasks as meaningless. Edwards suggests that art has a long history of use as a means to reveal unconscious and nonverbal messages (Edwards, 1992).

Some scholars regard doodling as a safe method of expressing emotions without worry of being evaluated by others (Torrey, 1989). Doodling is more abstract, which makes it less threatening than other direct message channels.

Doodling also helps people perform and improves memory by enabling them to marshal their will and focus their concentration (Torrey, 1989). Many reported that doodling while listening to a lecture or the radio makes them concentrate more on the speaker's speech and recall greater detail. On the other hand, certain speakers, teachers, and ordinary people become annoyed when an individual avoids eye contact with them. They interpret such avoidance as a sign of disregard or disrespect.

Dr. Jackie Andrade (2009), a British professor in Psychology at the University of Plymouth, theorizes that doodling helps a doodler remember more details. "People may doodle as a strategy to help themselves concentrate," said Andrade. To support this theory, she played a boring tape of telephone messages to a group of people. Among her subjects only half had been given a doodling task. The result showed that the participants who doodled remembered 29 percent more information from the tape compared to the participants who only listened but did not draw. Andrade (2009) was able to conclude that people become more capable of remembering if they doodle while listening because doodling prevents them from getting lost in daydreams.

Interpreting Common Doodles

Steiger (2004) interpreted a great amount of doodles in her book, *The Psychology of Doodles*. She used Freud's and Jung's works to interpret doodles. The following section will demonstrate in detail the indications of some of the most common doodles. Names mainly represent the identity of an individual. A person who writes his name in large letters means that he has a larger than life personality and others like his company because he entertains them perfectly. Someone who has low self-esteem will probably write his name in small letters. An obsessive personality could be identified from writing someone else's name and repeating it again and again. Drawing a circle around someone's name is a defensive attitude, while drawing a circle around your name reveals a lack of trust and emotions of isolation. A signature that has a line underneath refers to a person with high self-importance (Steiger, 2004).

Shapes of doodles are extremely revealing and almost everyone draws them (Rabach, 1972). Boxes and cubes show a practical, hard-working person. Triangles are usually drawn by males and show a strong personality. They also represent a person who searches for intellectual answers and takes risks. A triangle doodler can sometimes be harsh on himself, and a triangle drawn inside another triangle is a reflection of threat. Squares show a solid and practical personality, but at the same time this personality needs extreme stability and security in relationships. In Jung's opinion, circles symbolize an individual's soul and it is one of the most essential doodles. A person who draws circles is likely to be a loving and honest person who cares and supports individuals who are close to him. Furthermore, circles reveal attempts of trying to clear up conflict.

Food signifies the capacity for sensuality, especially if the food types are fruits. They also are an indication of a person who is embracing life and absorbing experiences. Fruit discloses nourishment of life events and

relationships, high sex drive, and erotic thoughts. Vegetables symbolize basic needs and contented material satisfaction (Steiger, 2004).

Hearts express our very core and essence as well. They represent a romantic person who is in love. A heart with an arrow refers to a daydreaming, idealistic, romantic personality. A broken heart is a mirror of our own heart. It reveals sadness, which could be a result of a break-up. In contrast, overlapping hearts show that a person is happy in a relationship. Hearts inside hearts demonstrate a shy person who faces difficulties in expressing intimate feelings with her partner.

Human figures mainly represent the way a person feels towards herself physically and socially. Childlike figures reveal a need for guidance and symbolize innocence. People who draw small figures of humans are unaware of their need for personal growth (Steiger, 2004). Eyes represent the inner self of a person. Big eyes reveal a sensitive personality, while small eyes indicate that a person is an introvert. Closed eyes imply that a person refuses to look deeply into his inner self (Nelson, 1992).

Generally, leaves show a deep love of nature and the shape of the leaves indicates more sophisticated details about a character. Pointed tips symbolize a tough personality who does not accept criticism easily. On the other hand, rounded leaves symbolize a happy person who has a sense of humor with a vivid imagination. Angel doodles express ones' emotions about death, heaven, and the afterlife. It also reflects a need to be guided if someone is making a crucial decision. Angels are usually doodled by females (Steiger, 2004).

Doodling and Symbolic Interactionism

Symbolic interaction theory is based on the idea that people construct meanings through communication. According to the theory, creating shared meaning is the primary objective of human interaction (West and Turner, 2010). The relationship between symbols and human interaction is a reciprocal relationship. As Burke suggests, humans are the creators of symbols (Foss, 2002). Individuals invent certain symbols to communicate with one another in certain settings. For instance, people produce symbols like hearts and happy faces to communicate feelings as they text each other. At the same time certain interactions influence humans to produce particular symbols. For example, people reflect clubbing atmospheres in doodles such as lips or beer glasses because they associate these symbols with such occasions.

The study of doodling could be applied to improve aspects of instructional and interpersonal communication, as well as rhetoric. Typically, instructors ask

students to stop doodling because they assume that students doodle only when bored or distracted. Conversely, students who share eye contact with the teacher may give an impression of being engaged when it is highly possible that they are actually daydreaming. However, if instructors were to recognize that students who doodle are likely to retain more information, this awareness would improve the instructor's estimation of doodler students (Andrade, 2010).

Another application of the appreciation of doodling in academic classes could be as a learning indicator. For example, if a teacher were to question a doodler on the lecture content and the student could not answer, the knowledgeable teacher would then recognize doodling as a sign of boredom. In such an instance, rather than blaming the doodler for inattention, the instructor would recognize the importance of adopting new teaching strategies in order to engage the student.

Moreover, attention to student doodles might be useful in directing students. For instance, students who doodle stars, stairs, diamonds, ladders, or hexagons are likely to be ambitious, achiever types directed by specific objectives (Steiger, 2004). Knowing this, instructors could target such students toward greater professional objectives, such as working on a scholarly project or submitting a paper to a conference. In contrast to this, through familiarity with doodling studies, teachers would also recognize that students who doodle swirl and spiral symbols probably lack direction and thus need more attention, motivation, and/or specific guidelines from their instructors (Steiger, 2004).

Doodling could also function as a positive or negative indicator when it comes to relational communication. Symbols are often used to communicate safety or public information messages (Adams, 2010). However, symbolic doodles could also be used to communicate messages of a more intimate nature. For instance, doodles of beds, breasts, eyelashes, cigarette lighters, lipstick, flowing hair, and cars usually signify sexual desire (Watts, 2005). On the other hand, symbols that signify a need to escape, such as planes and other transportation imagery, might be useful as early indicators to work on a relationship that is about to fall apart. People sometimes use symbols as an indirect speech of consciousness (Petrovsky, 2009). Individuals use indirect symbols instead of direct language because pictograms tend to be less hurtful.

Another application for doodling in interpersonal communication has to do with good timing, or what the Greeks referred to as *kairos*. Many relationship conflicts and misunderstandings stem from bringing up a topic at the wrong time. Doodling works as a mood indicator that can reveal one's state of mind to others. For instance, a person doodling a group of squares is likely to be

frustrated (Steiger, 2004). Trying to cheer him up would therefore be more helpful than introducing a serious matter to be addressed.

Doodling could also be used as a monitor to determine whether or not to initiate an intimate communication. For example, doodles of dogs reflect loneliness and the desire to be in a relationship (Watts, 2005). Such knowledge could be an impetus to initiate an invitation for either a date or a casual interaction. In contrast, one might be cautious about initiating such contact if a prospective partner is doodling a swan. This would signify that the doodler is already in a fulfilling relationship (Watts, 2005).

Further, doodles such as lips can give more indications about a lover's nature. Lips are an extremely sexual doodle. A confident sexual lover will be likely to draw full lips, whereas a person who is looking for a new partner is more likely to draw parted lips. An individual who lacks romantic relationships and sensuality will draw thin lips.

Why not ask a new date to doodle a lip?

Doodling could be useful in some rhetorical situations as well. Studying the general psychological themes of a given group of doodlers could help inform the selection of specified persuasion tactics to use on the group. For example, males typically doodle elongated or pointed geometric shapes, while females tend to doodle rounded shapes (Solway, 1971). If a speaker recognized that pointed shapes signify practical, solid, intellectually active personalities, he would know that he should stress logic and reason (logos) when trying to convince an all-male audience. Oppositely, a speaker who knows that rounded-shaped doodles represent empathy would rely on emotion (pathos) to persuade a female audience. A speaker's recognition that she should emphasize emotion with one audience and logic with another is critical in establishing the appropriate connection with each type of audience. Based on Burke's ideas, persuasion occurs when the speaker evokes a sense of communality with the audience (Griffin, 2011). This does not mean that a speaker must analyze the doodle of each audience member in order to be able to reach them; such an aim is impossible. However, one may gain a comprehensive understanding of an audience's nature from a general theme or categorization of a group of doodles. For instance, females commonly draw doodles such as lips, cats, dogs, flowers, tears, and hearts; cars and geometric shapes are more typical of male doodlers. According to Rabach (1972), gender is a factor in doodling patterns.

Another element to consider is the power of doodling in the political sphere. Doodles must be collected and destroyed after meetings of political bodies because doodling reveals so much about people's thoughts and

identities. If doodling did not have any significance and was harmless, then how might one explain the standard procedure of demolishing all scraps of papers at the ends of sessions occurring in the United Nations?

To demonstrate the importance of doodles in the political arena, Greenberg (2006), author of *Presidential Doodles*, has commented on two centuries of Oval Office presidential doodles. John F. Kennedy's doodles signified a sense of organization and confidence. In the early 1960s, when the Arab world was experiencing political chaos, a chain of overlapping squares emerged in President Kennedy's doodles. Steiger (2004) stated that a square doodle reveals a solid person who has a strong need for security and stability. She added that a collection of squares signifies frustration. If one is interested in gaining an in-depth knowledge of his boss, professor, or political leader, looking at that person's doodles is key.

Scholars might question whether it is better to fit doodling symbology under the communication categories of interpersonal, instructional, intrapersonal, non-verbal, or rhetoric. Symbolic communication could fit into any one of these categories, depending on the dynamic of the setting and the goal of the interpreter. If a person studies doodling interpretation to gain a better understanding of another individual, then that is interpersonal. If instead of an individual a person is interacting with a group of people or audience, then that is rhetoric. If one is only trying to get more insights about his personality, then that is intrapersonal communication. In all cases doodles are sort of non-verbal cues. The use of symbols through doodling does not have to be limited to one classification.

Between the Unconsciousness of Psychoanalysis and the Construction of Symbolic Interactionism

Doodles have been interpreted mainly by way of psychoanalysis. However, some of the symbols are socially constructed due to certain interaction settings. For instance, doodles such as lipsticks, flowing hair, cigarette lighters, and fancy cars are categorized as sexual doodles because they are features of clubbing or party settings.

As previously stated, when defining doodling, scholars agree that people doodle unconsciously. However, the notion of total unconsciousness contradicts the findings of a 2010 experiment that found that doodling helped participants remember more details from the audio played in comparison to those who only listen (Andrade, 2010). Based on this finding, one might instead conclude that

when doodling, one part of the doodler's attention is focused on doodling, while another part centers on the lecture or matter at hand.

Scholars question whether doodling should be interpreted from a psychoanalytical or a symbolic interaction perspective. Major differences exist between psychoanalysis and symbolic interaction assumptions, which explain their differing views on the significance of symbols. Freud interpreted meanings according to what his patient revealed to him. He considered doodles similar to slips of the tongue, dreams, and the forgetting of names, which are all emotions that people do not realize they have (Steiger, 2004). On the other hand, George Mead's theory of symbolic interaction dealt with ordinary individuals, who do not suffer any mental illness in their everyday life.

Psychoanalytic studies emphasize the doodling of individuals with mental illnesses whom are treated in clinics. Consequently, this approach fails to address people's shared meaning of symbol in reality. Furthermore, Freud's works stress sexuality as either repressed desires or sexual abuse in childhood. However, symbols that reveal sexuality like beds, breasts, or lipsticks could signify sexual flirtation. These sexual figures could also be interpreted according to evolutionary theory. The theory claims that individuals become attracted to their significant others depending on their needs and roles. Women look for men who stay around and commit to a relationship. They select men who could provide financial stability. From the beginning of human civilization, men have been concerned with reproduction, hence they select women with the best fertility. Drawing on that, the doodling of sexual figures by either gender tends to be normal, unlike Freud's perspective on how sexual figures relate to sexual repression or abuse.

Criticisms

This doodling essay was challenged by a couple of critiques by academic peers as it was presented at the National Academic Association convention. These criticisms were mainly regarding significance of the doodle, the interpretation accuracy, the possibility of multiple meanings, the interference of other factors, and also the non-doodler claim. These criticisms will be addressed in sequence in the following section.

Doodling significance is one of the most debatable issues. Some claim that the studies of doodles and their interpretations are meaningless and not valuable at all. They argue that not all things in life should be scientifically studied and interpreted. They perceive doodling as a strategy, which helps a person to focus more during a meeting, which prevents her from falling asleep,

or getting involved in daydreams. However, that does not mean that those drawings are interpretations of personality traits. Others also argue that people draw certain doodles because they are simply good at drawing them and it does not have anything to do with their personality or ways of perceiving life. Burns responds to those who disagree with the significance of doodles by explaining the reliability of doodling interpretations studies. He argues that it is only after careful study of doodles over many years and from many different individuals that the patterns and significance of doodle symbolism emerges. He adds,

Even at their simplest, the idle jottings we repeat in the margins of our notebooks can evoke childhood memories and associations that provide clues even to our obsessions. Stars, for instance, show up all the time in the drawings of emotionally deprived children. Stars are what we wish upon. People who fill their doodles with stars may be longing for something they were deprived of, like love or affection. (Juan, 2006).

Postmodern scholars claim that a doodle might have more than a single interpretation. Researchers have responded to that by explaining that doodles can have both a universal as well as a personal meaning. As demonstrated by Rabach (1972), the house doodle is a universal symbol of home. However, the condition and structure of a house are the basic standard that works as indicators of the doodler personality. For example, a tumbled down house represents anxiety and fear of aging, while a strong castle represents confidence and optimism. Additionally, the details within each house are significant too, so one must consider what is included as well as what is not included. Houses without windows or doors reflect unwillingness to be helped and a desire to be isolated. On the other hand, houses with plenty of windows symbolize a socially active person. Finally, houses under construction reveal a person who wants to repair past psychological trauma.

Another criticism is that the interpretation of doodling could be affected by other factors like hobby, occupation, and drawing skills. Some doodlers state that they are likely to doodle certain symbols because these particular doodles are relevant to their interests, jobs, or things they do on a regular basis. For instance, it is common for a cook or someone who is fond of cooking to doodle cookies, cakes, or candy. Those doodles do not necessarily imply a love of pleasure and special intimate relationships as psychoanalysts claim (Steiger, 2004). Burke's notion of occupational psychosis suggests that people's occupations shape the language and symbols that they use (Griffin, 2011). A doodle of a book or a pen in a student notepad is not always a sign of his

passion for knowledge. That could be related to his role as a student. Drawing skill levels are another debatable factor. One might claim that doodling certain symbols is the result of being good at doodling those particular symbols. In that case, one must distinguish between doodling and drawing. If a person decides to render an image before they put it on the page, this would fall into the category of drawing rather than doodling. Watts (2005) responded to this final criticism by stating that not everyone doodles. He explained that underlining, shading things, signatures, and decorating names are all considered a form of doodling. Thus, doodling is not limited to images only.

Commentary

After researching a fair amount of literature, I believe it is essential to consider the following before jumping to conclusions. First, interpreting doodling may not be the best way of understanding an individual or what the other is trying to communicate. However, doodles shed light on a universal behavior observed in human communication. Symbolic interaction was chosen as a theoretical framework because it provides a new understanding of people, as is the case of interpretive theories. Secondly, a doodle can give an insight about the doodler's emotions, state of mind, or personality, but it cannot reveal everything (Rabach, 1972).

Thirdly, there is a distinction between doodles that are a regular part of a person's doodles and those that are rarely produced. The first reflect dominant and influential aspects of the personality, while the latter reflect minor personality tendencies and short-lived emotional reactions like the chain of boxes produced by Kennedy (Watts, 2000).

Another issue is the idea of the general pattern, which could act as good indicators. For instance, any symbol that is surrounded by a circle signifies defensiveness. Such a pattern indicates that the doodler is creating a kind of barrier. What is interesting about doodles is that we all have a pattern. Some draw circles, while others draw shapes or shade images. Sometimes the doodle is based on an internal or external stimulus. If one carefully looks at a collection of doodles, patterns will emerge.

Finally, the limited literature in doodling creates both an obstacle and a challenge for researchers (Appelman, 2007). However, some researchers are providing manuals that help the public understand spontaneous drawing rather than limiting such studies to therapists and specialists who perceives doodles as diagnostic tools.

Conclusion

Whatever we may call it—scribbles, markings, drawings, signatures, caricature, or simply art—doodles have different purposes and applications. This paper combines the perspectives of psychoanalysis and symbolic interaction to interpret doodles. It explores the relationship between doodling and human communication. The essay presents application of doodling studies in interpersonal communication, instructional communication, and rhetoric. Finally, the common criticisms that face doodling studies have been addressed.

People hold different opinions on the usefulness of doodling. However, studying doodles provides useful insight for those who are heavy doodlers and those who might work with doodlers. Doodling research prevented me from repeating my instructor's mistake by not allowing me to doodle sometimes.

References

- Adams, A., Boersema, T., & Mijksenaar, M. (2010). Warning symbology: Difficult concepts may be successfully depicted with two-part signs. *Information Design Journal (IDJ)*, 18(2), 94-106.
- Andrade, J. (2010). What does doodling do? *Applied Cognitive Psychology*, 24, 100.
- Appelman, T. (2007). *Draw me a picture*. Amsterdam: Th.L.M Foks-Appelman.
- Armstrong, M. L., Owen, D. C., Roberts, A. E., & Koch, J. R. (2004). Towards building a composite of college students influences with body art. *Comprehensive Pediatric Nursing*, 27, 277-295.
- Edwards, B. (2000). *Drawing on the right side of the brain*. London: Souvenir Press.
- Firmin, M. W., Luke, M. T., Foster, J., & Angelini, T. (2008). Christian student perceptions of body tattoos: A qualitative analysis. *Journal of Psychology and Christianity*, 27 (3), 195-204.
- Fisher. (2002). Tattooing body, marking culture. *Body & Society*, 8(4), 91–107.
- Schott, G. D. (2011). Doodling and the default network of the brain, *The Lancet*, 378.
- Greenberg, D. (2006). *Presidential Doodles*. New York: Basic Books.
- Griffin, E. (2011). *A first look at communication theory*. New York: McGraw Hill.
- Juan, S. (2006). Why do we doodle? *The Register*, Retrieved from http://www.theregister.co.uk/2006/10/13/the_odd_body_doodling/print.html

- Nelson, N. (1992). *The doodle dictionary: A guide to understanding your doodles*. New York: Main Sreeets Books.
- Petrovsky, H. V. (2009). Toward the image. *Russian Studies in Philosophy*, 48(2), 63-74.
- Rabach, J. (1972). *What your doodles mean*. New York : Dell Publishing Co.
- Solway, K. S. (1971). Freudian and cultural symbolism. *Journal of Clinical Psychology*, 27(4), 516-518.
- Steiger, E. (2004). *The science & psychology of doodles*. London: Kandour Ltd.
- Torrey, J. J. (1989). Breaking the code of doodles. *Omni*, 11(7), 64.
- Vinter, C. L. (2008). *Drawing and the non-verbal mind*. New York: Cambridge Press.
- Watts, M. (2005). *Doodle interpretation*. Coventry, UK: Hodder & Stoughton.
- West, R., & Turner, L. (2010). *Introducing communication theory: Analysis and application*. New York: McGraw-Hill.
- Wilkinson, K. M., & Snell, J. (2011). Facilitating children's ability to distinguish symbols for emotions: The effects of background color cues and spatial arrangement of symbols on accuracy and speed of search. *American Journal Of Speech-Language Pathology*, 20(4), 288-301.