

Lateral Thinking in Typography Layout System

(Alternative Layout Design for Effective Message Delivery)

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Abstract—The layout system is a means to convey content verbally using writing. Therefore, the layout has an essential role in the communication process. The layout system that is arranged creatively is not impossible to help communicators convey messages and information to the communicant effectively. This study aims to find and introduce typography layout systems using creative thinking. The method used in this study is the Lateral Thinking method. Lateral thinking is a method for generating new ideas. Lateral thinking is also concerned with solving concepts that present old ideas. It led to a change in thinking and approach. It also to look differently at things that have always been seen in the same way. Liberation from old ideas and stimulation of new ideas are twin aspects of lateral thinking. The steps in this method are as follows: 1) Alternative, 2) Focus, 3) Challenge, 4) Random Entry, 5) Provocation and Movement, 6) Harvest, and 7) Idea Treatment. The result of this research is the classification of system layout based on creative thinking, namely: 1) Axial design, 2) Radial design, 3) Dilation design, 4) Grid design, 5) Transition design, 6) Bilateral design, and 7) Modular design.

Keywords—*lateral thinking, layout system, typography*

I. INTRODUCTION

Lateral thinking techniques provide a deliberate and systematic process that results in innovative thinking. Lateral thinking using these unconventional thinking techniques allows designers to find creative solutions that designers may not have considered. Lateral thinking must be distinguished from critical thinking. Critical thinking is primarily concerned with assessing the actual value of statements and finding faults. In contrast, lateral thinking focuses more on the "movement value" of statements and ideas [1]. A person uses lateral thinking to move from one known idea to a new one. Likewise, to develop ideas in compiling a typography layout system [2].

Typography layout is a typesetting system which is a technique of manipulating the arrangement of letters or words by regulating their distribution in an available field to make a particular impression with the aim of maximum comfort when reading it both at close and long distances so that the intent and meaning of the message can be conveyed quickly. Very visually good to the reader. Several layout techniques can be

used to convey messages [3]. This form of layout can also be developed in a more complicated form according to the needs of delivering the message and the type of audience. The typography layout system must be dug more profound so that there are more options for layout [4–6]. So far, designers have only used a monotonous layout design style, causing minimal design creations. Meanwhile, developing designs is huge and wide to enrich visual references, especially typographic layouts [6,7]. Developing a system layout using the Lateral Thinking method can add to the choice of interface form and still include aesthetic elements in the final design of the typography layout system.

II. METHODS

A. Lateral Thinking

Lateral thinking means being able to think creatively or "outside the box" to solve problems. Usually, logical thinking is used to solve problems straightforwardly (also known as vertical thinking). However, lateral thinking looks at things from a sideways perspective (also known as horizontal thinking) to find answers that are not immediately obvious. The term was first coined by psychologist Edward de Bono [8]. With the lateral thinking method, the layout form for delivering messages using typography is the subject to be developed. The data taken comes from microblogs that provide examples or design references developed into new forms. The data will be combined and tested based on the lateral thinking method.

De Bono's statement is contrary to the concept of Linear thinking, which manifests a standard, steady, empirical, measurable sequence in a thought process that De Bono considers less accommodating to finding alternative solutions. This linear thinking pattern that tends to be standard is also called the traditional thinking pattern.

Edward de Bono, in his book 'Lateral Thinking,' divides thinking patterns into two, namely vertical and lateral. Edward de Bono introduced the term "lateral thinking" to describe this thinking pattern. In contrast, the "vertical thinking" pattern was used to describe conventional logical thinking processes [9,10].

The process of carrying out lateral thinking is as follows (Figure 1):

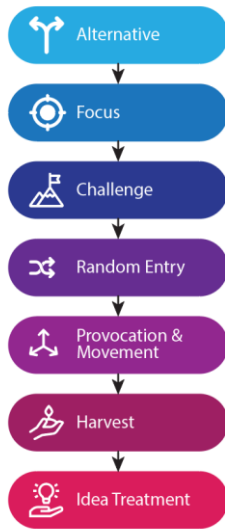


Fig. 1. The procedure of lateral thinking method [9].

B. Alternative

This technique is all about using concepts as a means of developing new ideas. A concept is a general theory or way of doing something to fit a need or desired result. Thinking of various ways to implement a concept is one way to generate ideas. The designer can then further assess each specific idea to produce additional concepts that can still be developed into a more particular form. Establishing a new concept creates a new way to generate more ideas.

In this alternative step, what is done is to use concepts to develop new ideas. Concepts are determined with the help of brainstorming or mind mapping. The development of the concept in the layout can be seen from the target audience and the potential for the right layout for the audience and the media used.

C. Focus

Focus on sharpening or enhancing creative efforts. From brainstorming, we get keywords that will be used to focus ideas. These keywords are also meant for designers to always take a straight path according to the initial concept. When and how to change designer focus to enhance designer creative efforts. Designers can learn to focus on areas that other people do not think about the layout. Doing so can lead the designer to a breakthrough idea because the designers were the first to notice that area.

D. Challenge

Challenge techniques are about breaking free from the boundaries of traditional thinking and accepted ways of doing things. It is based on the assumption that there may be a

different and better way of doing things even if there are no apparent problems with the current way.

E. Random Entry

The Random Entry technique is all about using unconnected input to open up new lines of thought. This technique draws designer's minds to find connections between seemingly unrelated things. With this technique, The designers can use randomly selected words, pictures, sounds, or other stimuli to open new lines of thought.

F. Provocation and Movement

Provocation is about generating provoking thoughts and using them to build new ideas. It is a process that allows the designers to think outside the box to come up with an exciting list of innovative ideas to consider.

G. Harvest

Harvesting techniques involve selecting specific ideas that seem practical and have the most value and then recasting them into practical solutions. It is about turning initial ideas into workable ideas. This technique is done towards the end of the thinking session to select ideas that may prove valuable in the current or future situation. Harvesting helps the designers identify ideas that can be implemented immediately and ideas that may require more work.

H. Idea Treatment

The treatment of ideas involves forming and reinforcing ideas to best suit a particular organization or situation. The best treatment technique is to work with initial ideas to make them more specific and practical for a particular situation. For example, designers might think of some obstacles that might interfere with the execution of an idea. Hence, the designer shape or restructure the idea to fit those constraints.

III. RESULTS AND DISCUSSION

From the development of layout forms using the lateral thinking method, several models of system layouts are obtained that can be used in conveying messages. These layout forms, of course, do not have to be used in interface design.

A. Axial Layout Design

A layout that has a solid visual appearance in the middle of the page with the display of supporting elements around the main image is usually an image or text related to the display in the middle of the page as the center point. To create an axial design, divide everything by an imaginary line (axis). To create a bilateral design, place the center of everything on the same line. The difference may sound semantic, but it is not. In the first line, each line of text stays on one side; on the last side, the text crosses. If this difference does not make sense now, read on, then compare this to a bilateral design.

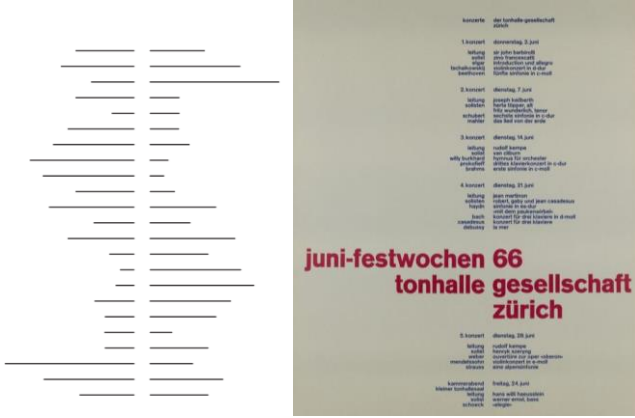


Fig. 2. Rough layout and example of axial design [11].

There is no specific requirement that a column is made to be a certain size — or even to be the same size on both sides. Thin columns make content easy to digest [12]; Designs can make each column a single word, phrase, or sentence. Wider columns give us more room to play, as we can enter whole sentences or paragraphs comfortably. The arrangement of columns and text content affects visibility, whether it looks comfortable by keeping the content elements apart or looks tight and dense to make the reader uncomfortable. This design can be used for covers, posters, and tables of contents to be more aesthetic [13]. An example of using Axial in the typography layout system by Joseph Müller-Brockmann is shown in the following figure 2.

B. Radial Layout Design

The radial system takes its name from the sun — all elements are arranged like rays coming from a central focal point. This layout is a dynamic composition strategy because it refers to dynamic actions. Examples of radial shapes from nature, such as explosions, flowers, spiders, stars, are all exciting and dynamic. Just as it is challenging to handle natural objects, reproducing a radial composition is not easy. There are issues with readability unless types are placed and scaled very carefully. Each line starts and ends in a different place, so continuity is also challenging to control. For example, a designer may take a traditional approach so that text is read from top to bottom or a reverse approach to read from bottom to top. Arranging the text on either side of the center may also be effective. It is essential to try to place the type in different positions and different relationships until it works with composition and is easy to read.

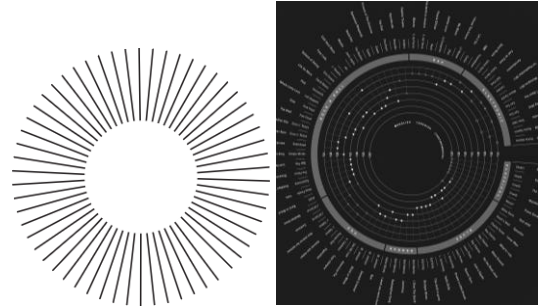


Fig. 3. Rough layout of the radial design [14].

To create a radial design, select a central focal point, and position all content to radiate outward from that point. Tires, jellyfish, domes, and objects that use basic circular shapes use a radial layout. Text may be harder to read if it is laid out in a radial layout. Hence, it is unsuitable for layout book content, but the radial design is beneficial for posters or interactive websites. This layout is one of the more visually appealing layout systems. An example of using this layout is as follows in figure 3 above.

C. Dilatational Layout Design

The dilatational system mimics the look of still water when pebbles are dropped into it, creating rings of larger and larger sizes as they move away from the center. Like the radial system, this composition has a solid focal point. However, unlike the radial system, the composition creates rings, not rays, that expand from the center. Another example of this system is the iris or sound wave representation. It could be said that dilatational is a design using types arranged along circular grooves [15]. Basically, rather than radiating out of a point, the text forms a curve around a point as in a radial design. Tree trunk rings are a great example of dilatational design. This interface is another example where text can be challenging to read; if the words form a full circle, the text at the bottom will be reversed. Dilatational design is suitable for small blocks of text and posters. Rough layout and example of dilatational design can be seen in figure 4.

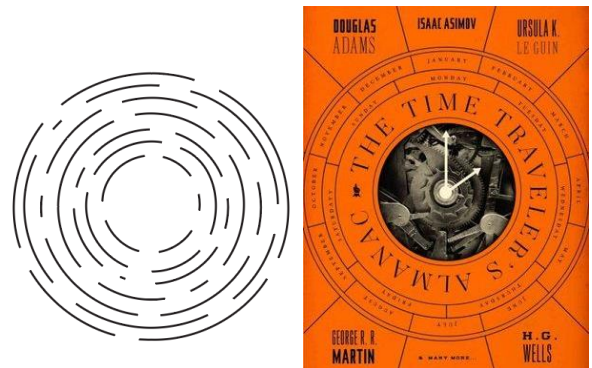


Fig. 4. Rough layout and example of dilatational design [16].

Sometimes we want to use circles to keep the letters well-spaced. However, we can also use a slightly different center point (can be by shifting the center point); this creates a more organic — though less organized — look.

D. Grid Layout Design

A grid is a network of lines that arranges the placement of elements and creates relationships between them. The grid divides the design space into vertical and horizontal divisions [17]. The grid connects design rationale and initial implementation for each project, turning concepts into structured spaces. It is a beautiful tool for composing, arranging, and arranging every kind of visual element. Grids usually work invisibly in the background, but they can also be active and visible elements. Designers use grids in a variety of ways. They can be very disciplined in following their grid structure from the start of the project or using it as a starting point for composition and order.



Fig. 5. Rough layout and example of grid design [18].

Some of the world's best designers and designers use grid layouts almost exclusively. Massimo Vignelli and Josef Müller-Brockmann advocate its use over all other systems. Learning to create a good grid layout requires some math, some preparation, and a lot of discipline [12, 13]. With a grid, all text and graphics fit right into columns and rows. Using grids prioritizes text, so there is rarely any doubt about readability. This system works well on posters, books, essays, websites, cards, resumes — just about anything. An example of its use is as follows in figure 5 above.

E. Transitional Layout Design

The transition typography system is defined by layering text into informal textured areas and shifting the pitch. The shapes and ribbons created with this layering approach do not harmonize and create an overall organic atmosphere. This visual approach is often used in Post Modern designs where clear readability of the text is not as important as the visual mood of the design. The text fields in Post Modernist's work lead the viewer to the central theme of the message rather than articulating the message in a clean and concise text setting.

Compositions that use a transitional approach have a light and airy appearance that abstractly implies cloud formations or

wood grain patterns rather than solid concrete forms made using a lattice or axial system. Transitional compositions have lively and active negative space. They can create an excellent foundation for vital focal points when contrasted with other compositions.

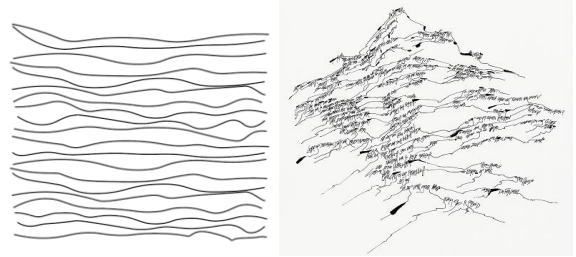


Fig. 6. Rough layout and example of transitional design [19].

The transition designs are some of the weirdest. They look like a cross-section of the earth — with layers of sediment and rock. That is all designers can say about transitional designs — we have to look at them to see what designers mean. Transitional design cannot be recommended for most projects; This design looks too disorganized for a resume or brochure. This design can still be used for posters and book covers—an example of its use in the following figure 6 above.

F. Bilateral Layout Design

Bilateral designs are ubiquitous, but we may know them by another name: centered designs. Maybe we will think that the bilateral design is boring. This design is very ordinary. Many things in nature have a bilateral design. This design idea becomes much more absurd when we realize that words commonly laid out are not symmetrical so that no design can be symmetrical. However, we still deserve to know how to create bilateral designs, and we will do our best to make the best use of this design style.



Fig. 7. Rough layout and example of bilateral design [20].

Put all the text in the artwork. Center the text. Now it is clear. A page full of text in the middle looks ugly, so how do we center something and still make it look good? Usually, this

type of layout is used for invitations. An example of the use of a bilateral design is shown in Figure 7 above.

G. Modular Layout Design

The modular organization is a compositional method that takes advantage of precision (by limiting form) and freedom from structure (modules can be of any size and placed anywhere in space). Modules can also be uniform and contained within a structure (grid) [21]. A module is a fixed element used in a more extensive system or structure. For example, pixels are modules that build digital images.

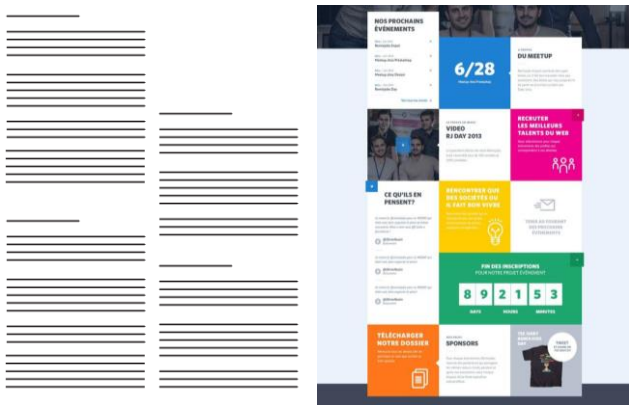


Fig. 8. Rough layout and example of modular design [22].

Usually, people associate modular layouts with grids. At the same time, they go well together, and nothing is forcing us to use a grid here [23]. Modular layouts use repeating structures to break up content. This structure can be anything: basic shapes are the most common. It is recommended to use a modular design for pre-cut content pieces. For example, a poster that lists several series in a series is a great fit. This design is commonly used for magazine, newspaper, or blog content. An example of its use is shown in Figure 8 above.

IV. CONCLUSION

Graphic design styles move very quickly. Maybe in other industries too. The existing layout design style may change according to the era. Technology also plays a role in the development of system layouts. The seven typography layouts are the result of a series of research on layout forms. Visual communication designers, UI designers, and designers, in general, must be observant in seeing the layout needs so that the communication delivered can be right on target. The audience can receive the message properly, correctly, and comfortably. In the following years, the layout design system is not impossible. It will continue to develop because humans basically will look for a new design style when the old one is deemed no longer effective in conveying messages. Using De Bono's idea development technique, namely Lateral Thinking, we can explore various types of design possibilities that can be used to convey messages while still emphasizing the artistic side. The seven system layouts used in typography can be used as references and references in arranging designs and

conveying messages and visual communication. Each form of system layout has different strengths and functions. Designers can choose and combine these system layout forms according to their needs by considering the audience as the message's recipient.

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REFERENCES

- [1] E. de Bono, *Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas*, 1st ed. New York: Harperbusiness, 1993.
- [2] I. H. Witten, "Elements of computer typography," *Int. J. Man-Mach. Stud.*, vol. 23, no. 6, pp. 623–687, 1985
- [3] S. Rustan, *Hurufontipografi*. Jakarta: Gramedia Pustaka Utama, 2011.
- [4] H. Hu, C. Zhang, and Y. Liang, "A study on the automatic generation of banner layouts," *Comput. Electr. Eng.*, vol. 93, p. 107269, 2021
- [5] J. Amar, O. Droulers, and P. Legohérel, "Typography in destination advertising: An exploratory study and research perspectives," *Tour. Manag.*, vol. 63, pp. 77–86, 2017.
- [6] S. Yurtkuran, G. Kırıl, and Y. Taneli, "Use of the Semantics of Typography in Architectural Design Education," *Procedia - Soc. Behav. Sci.*, vol. 106, pp. 3253–3258, 2013.
- [7] M. Carter, "4 - Typography," in *Designing Science Presentations (Second Edition)*, M. Carter, Ed. Academic Press, 2021, pp. 43–55.
- [8] E. de Bono, *Lateral Thinking: A Textbook of Creativity*. London: Penguin, 1991.
- [9] J. Huber, "Lateral Thinking Techniques Used In The Problem Solving Process," 2020. [Online] Retrieved from: https://www.researchgate.net/publication/338966639_Lateral_Thinking_Techniques_Used_In_The_Problem_Solving_Process.
- [10] A. S. Pahlevi, "Lateral thinking de bono dalam perancangan desain," *JADECS*, vol. 3, no. 1, p. 7, 2018.
- [11] J. Müller-Brockmann, "AGI Open London 26—27.09.13 Poster," 2013. [Online] Retrieved from: <https://id.pinterest.com/pin/496873771373043817/>
- [12] R. Brath and E. Banissi, "Using Typography to Expand the Design Space of Data Visualization," *She Ji J. Des. Econ. Innov.*, vol. 2, no. 1, pp. 59–87, 2016.
- [13] Y. A. L. Hermanto, A. S. Pahlevi, and A. A. Sutrisno, "Identifikasi ilustrasi-tipografi graphic vernacular sebagai sistem tanda & identitas warung tenda di kota malang," *JADECS*, vol. 3, no. 2, pp. 78–87, 2019.
- [14] M. Portomeñe, "Music Infographics Poster," 2012. [Online] Retrieved from: <https://www.behance.net/gallery/6469623/Music-Infographics>.
- [15] D. Puhalla and K. Cullen, *Layout Workbook: Revised and Updated: A real-world guide to building pages in graphic design*, Revised, Updated edition. Beverly, USA: Rockport Publishers, 2018.
- [16] A. Vandermeer and J. Vandermeer, "The Time Traveler's Almanac Book Cover," 2014. [Online] Retrieved from: https://www.npr.org/2014/03/19/289059215/the-worlds-smallest-time-machine-is-still-pretty-big?utm_medium=pinterest&utm_source=books&utm_campaign=artsculture&utm_content=03192014?utm_medium=pinterest&utm_source=books&utm_campaign=artsculture&utm_content=03192014.

- [17] Y. A. L. Hermanto, "Visual storytelling in folklore children book illustration" *Asian Journal of Research in Education and Social Sciences*, vol. 1, no. 1, pp. 62-70, 2019.
- [18] D. Terror, "Lessons From Swiss Style Graphic Design," 2009. [Online] Retrieved from: <https://www.smashingmagazine.com/2009/07/lessons-from-swiss-style-graphic-design/>
- [19] R. Seibold, "Psalm 90 Poster," 1990. [Online] Retrieved from: https://www.berliner-sammlung-kalligraphie.de/kgraph_seibold_e.htm
- [20] J. Zhao, "CDF Poster Series Documentation," 2017. [Online] Retrieved from: <https://medium.com/@jiayizhao/cdf-poster-series-documentation-96542337733a>
- [21] E. Kilic, "2D Environmental/Spatial Typography Practice for Graphic Design Students," *Procedia - Soc. Behav. Sci.*, vol. 46, pp. 3063–3067, 2012.
- [22] C. Team, "Design trends to try in 2021," 2021. [Online] Retrieved from: <https://www.canva.com/learn/design-trend/>
- [23] R. de Villiers, "Consumer brand enmeshment: Typography and complexity modeling of consumer brand engagement and brand loyalty enactments," *J. Bus. Res.*, vol. 68, no. 9, pp. 1953–1963, 2015.