Schematic Image Compositions and the Conveyance of Feelings

Jakob Kilian Heiss, Luzie Marie Ditterich, Thuy An Thi Nguyen and Vera Hesslinger

University of Bamberg, Department of General Psychology and Methodology

Introduction

Building on Wolfgang Kemp's *aesthetic of reception* theory (e.g., Kemp, 1998), this exploratory study investigates how horizontal, vertical, and diagonal image breaks (*Bildbrüche*) invite the perception of different feelings and emotional states.

Damiano et al. (2023) demonstrated that color plays a crucial role in predicting emotions expressed through art, with colored drawings yielding significantly higher accuracy than line drawings. However, this raises the question of whether lines and their orientations could also serve as key elements in emotional interpretation. Ibáñez et al. (2011) found that emotions can be conveyed through minimalist compositions, with line movement representing arousal and symmetry representing valence. Symmetry in the lines was associated with positive valence, while asymmetry indicated negative valence. These elements—arousal and valence—were perceived independently, which highlights the specific role of different abstract visual features in emotional interpretation.
Another study found that upward diagonal lines are associated with positivity and activity, likely due to the left-to-right reading direction in Western cultures (Schlosser et al., 2016).

Based on these results and inspired by Caspar David Friedrich's moving artwork *Monk by the Sea* (Figure 1), with its horizontally divided composition, we want to explore how art can serve as a communication channel to convey more specific emotions through minimalist image compositions.
We assume that horizontal image breaks convey balance and neutral valence, vertical fractures convey conflict and negative valence, and diagonal fractures, depending on their direction, convey optimism (upwards) or pessimism (downwards).
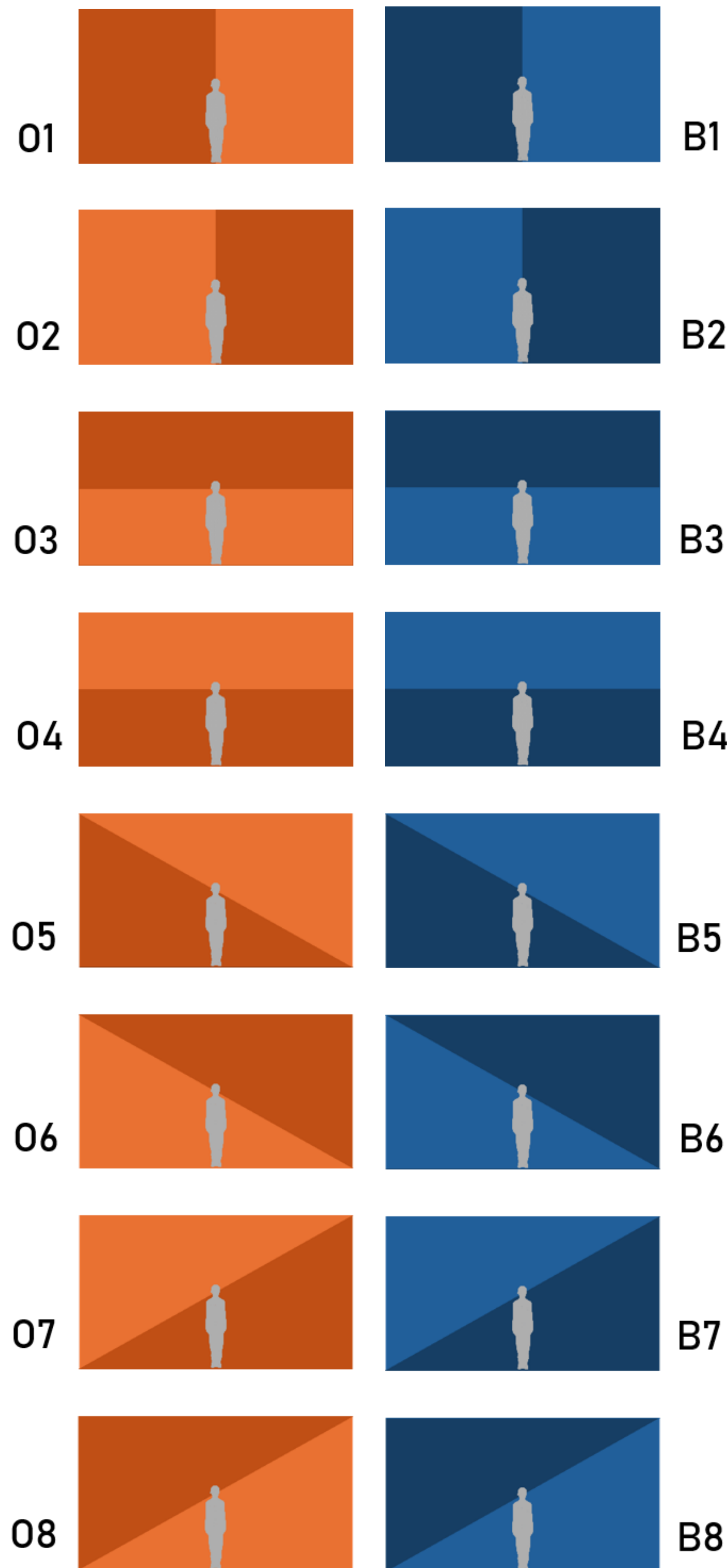

**Figure 2**. Stimuli: Set *orange* and set *blue*.

Method

Participants: A total of 118 participants (98 women and 20 men; *M*= 22.9 years, *SD*=7.2) took part in the study.

Apparatus and Stimuli: The study was run online with LimeSurvey. The stimuli (Figure 2) consist of two color sets—blue ("B1-B8") and orange ("01-08"). Each set contains eight variations which differ in brightness level and line orientation. The backgrounds are separated into two color shades by horizontal, vertical or diagonal lines, creating an image break. The diagonal lines are falling or rising. At the center of each stimulus is a grey human figure which remains constant across all images.

Design and Procedure: The participants saw all eight stimuli belonging to the same color set twice in randomized order, one at a time. In the first round, they were instructed to describe what they believed the person in each stimulus might be feeling, using a single word of their choice. In the second round, the participants were asked to evaluate the emotional state of the person in the image, using seven-point semantic differential scales covering the following dimensions: *balanced/unbalanced*, *decided/undecided*, *optimistic/pessimistic*, *good/bad*. The dimension *blue/orange* was additionally included to measure how attentive the participants were during the survey. The procedure was then repeated for the other color set (sequence of sets counterbalanced across participants).

Data Processing: The collected data was analyzed in Excel. For the qualitative part, responses were grouped into 18 subcategories, which were then further condensed into our ten main categories. While data from all 118 participants were included in the qualitative analysis, several participants did not pass the attention check and their quantitative data were excluded from the descriptive analysis.
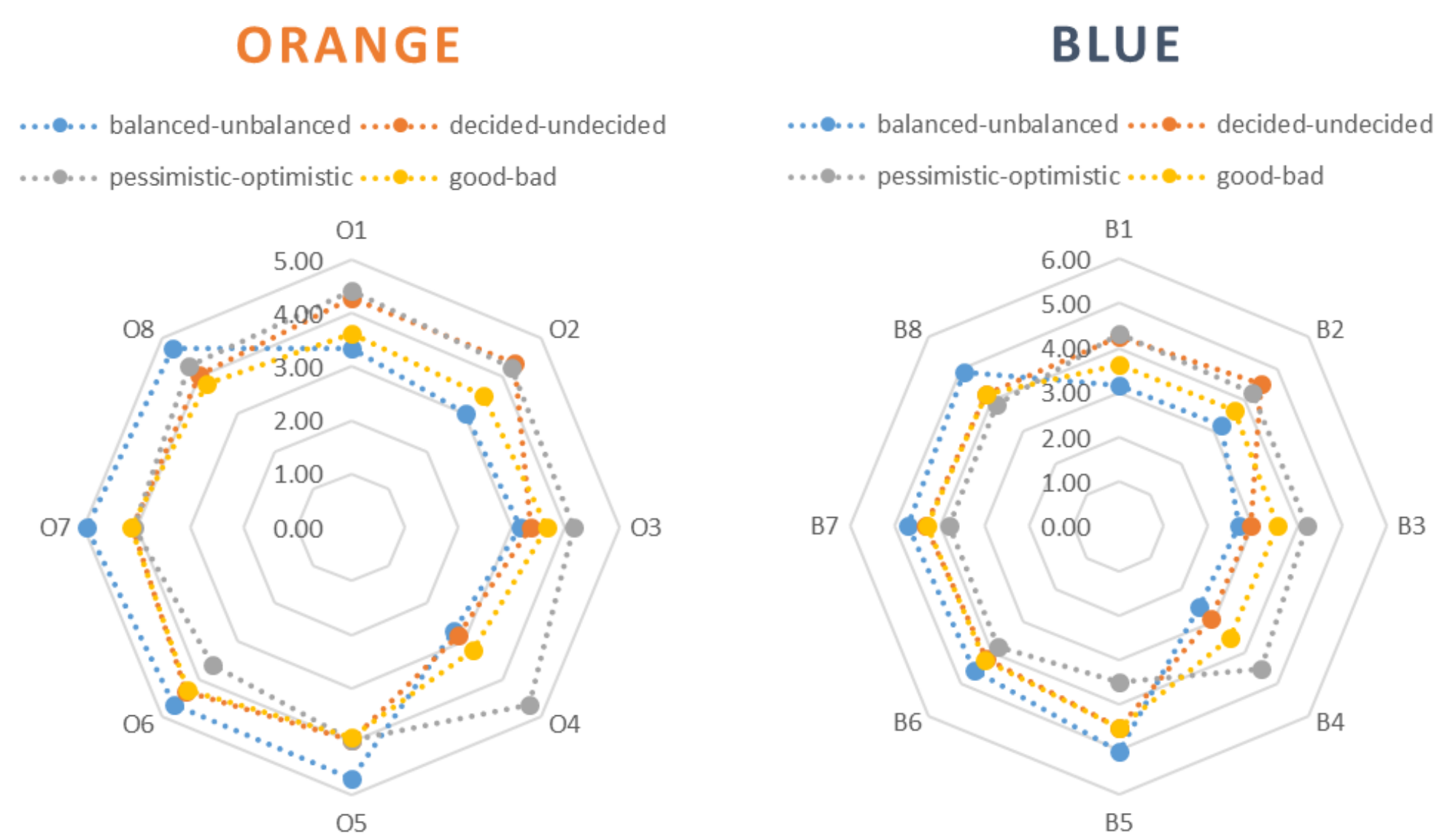
Figures 3 & 4. Quantitative results of each set of stimuli.

Results

The quantitative data indicate a minor influence of color on the evaluation of the stimuli: The evaluation patterns of the blue and orange stimuli are largely similar. In all stimuli, the human figure tends to be associated with a more negative valence, yet is at the same time rated as rather optimistic. In addition, the person in vertical image compositions is rated as rather undecided.
Regarding the horizontal image compositions, it is also noticeable that the person in B4/04 is rated as particularly optimistic. In contrast, the person in the diagonal compositions appears rather unbalanced and undecided. Whether the diagonals rise or fall, however, has no notable influence on the evaluation. See Figures 3 and 4 for an overview.
When looking at the qualitative data (see Tables 1 & 2), the comparatively frequent mention of terms for indecision is particularly remarkable in connection with vertical image compositions. This observation is consistent with the ratings in the quantitative part.
Furthermore, considerably more negative than positive or neutral terms are used to describe the person's feelings. Positive terms are chosen more frequently for orange stimuli than for blue stimuli.

Figure 1. Caspar David Friedrich, *Der Mönch am Meer*, zwischen 1808 und 1810, Öl auf Leinwand, 110 cm × 171.5 cm, Berlin, Alte Nationalgalerie.

Table 1. Number of words and valences for each composition in the stimulus set *blue*.

	B01	B02	B03	B04	B05	B06	B07	B08
decided	7	5	9	8	4	8	8	9
undecided	53	59	4	2	18	18	9	15
amazed	4	1	0	1	8	5	9	6
hopeful	5	2	8	11	12	12	16	17
depressed	4	3	21	15	16	13	12	10
helpless	3	1	8	10	6	10	11	6
balanced	17	14	21	24	7	5	2	3
neutral	12	12	11	13	7	7	5	5
stressed	4	4	11	7	11	8	7	10
lonely	4	7	12	14	15	21	22	22
sum main categories	113	111	105	105	104	107	101	103
entries overall	118	118	118	118	118	118	118	118
Valence								
positive	28	21	41	46	27	27	28	23
neutral	19	15	14	15	16	15	20	10
negative	71	75	63	57	75	76	70	85

Table 2. Number of words and valences for each composition in the stimulus set *orange*.

	O01	O02	O03	O04	O05	O06	O07	O08
decided	8	8	10	16	11	16	9	13
undecided	50	51	4	4	18	24	18	21
amazed	3	0	0	5	10	5	9	9
hopeful	6	7	11	21	15	13	20	21
depressed	0	0	10	6	9	10	12	5
helpless	4	3	8	5	10	10	8	9
balanced	13	14	25	19	5	3	6	2
neutral	11	10	11	14	6	8	9	10
stressed	10	4	18	9	13	10	11	11
lonely	4	5	7	5	10	7	8	5
sum main categories	109	105	104	104	107	106	110	106
entries overall	118	118	118	118	118	118	118	118
Valence								
positive	29	35	43	56	32	35	36	39
neutral	15	10	13	17	17	12	11	22
negative	74	72	62	45	69	71	70	57

Discussion

The results indicate that the orientation of image breaks in image compositions could have a strong influence on the conveyance of feelings and emotional states. Moreover, this influence could be stronger than that of color in terms of the stimuli used. Even if the ecological validity is likely to be even lower as a result, reducing art to highly simplified and schematized image compositions seems to be a suitable approach for further research in this direction. Overall, the results of this exploratory online study suggest that this approach should be tested for significant effects in future under controlled conditions and with a larger and more heterogeneous sample.

References

Damiano, C., Gayen, P., Rezanejad, M., Banerjee, A., Banik, G., Patnaik, P., Wagemans, J., & Walther, D. B. (2023). Anger is red, sadness is blue: Emotion depictions in abstract visual art by artists and non-artists. *Journal of Vision, 23*(4), 1–16.

Ibáñez, J. (2011). Showing emotions through movement and symmetry. *Computers in Human Behavior, 27*(1), 561–567. https://doi.org/10.1016/j.chb.2010.10.004.

Kemp, W. (1998). The work of art and its beholder: The methodology of the aesthetic of reception. In M. A. Cheetham (Ed.), *The subject of art history—historical objects in contemporary perspectives* (pp. 180-196). Cambridge.

Schlosser, A. E., Rikhi, R. R., & Dagogo-Jack, S. W. (2016). The ups and downs of visual orientation: The effects of diagonal orientation on product judgment. *Journal of Consumer Psychology, 26*(4), 496- 509. https://doi.org/10.1016/j.jcps.2016.01.003.