

Influence of Horror Vacui in the Aesthetic Response of Low-income Workers to Print Media

ABSTRACT

Should designs be based on how much money a person makes? We answer this question by validating if the economic capital of a person shapes his aesthetic judgment, and if the excessive amount of information in a stimuli (horror vacui) influences aesthetic response. Design preference surveys & interview data were gathered from 30 low-income workers from metro & rural Philippine locations. Both groups revealed identical tastes in print media where 100% of them perceived horror vacui designs to have better appeal, value, readability and credibility than their minimalist counterparts— a result of increased conceptual fluency due to meaningfulness as horror vacui's quantity of elements symbolizes completeness and abundance. This insight will allow communicators to design better print material for low-income audiences who, evidently, do not subscribe to international design standards.

Keywords: horror vacui, taste culture, class-based aesthetics, processing fluency

INTRODUCTION

How should we design print media for low-income groups? Should designs be always aspirational? In different parts of the world, minimalism is one major design trend— connoting clarity, sophistication and elegance. It is considered to be aspirational and more and more Philippine visual designers are subscribing to this international standard of taste as seen in popular advertising, packaging, web design, and visual merchandising.

Similarly, in the UPOU DEVC 206 Module^{*}, under Principles of (Good) Layout Design, a simple print design is encouraged— one that does not “visually overwhelm the reader with a lot of conflicting and distracting elements” and uses white spaces generously. It can be said that minimalism aids in communication as it removes “excess noise”.

However, there is evidence that minimalism in visual consumer media has a subjective, antithetic effect on low-income audiences. They are often intimidated by minimalist designs (e.g., interior design of high-end retail and dining establishments) and seem to propagate a natural urge to fill empty spaces known in art theory as *Horror Vacui* [Mortelmans 2005].

Since eighty three percent of the information we ingest is through sight [Rosenblum 2010] and with the human tendency to perceive attractive things as better and more acceptable [Butler et al. 2010], it is important for (development) communicators to understand what designs elicit a more positive response from its (low-income) audiences. This research shall dig into how aesthetic preferences are developed and if low-income groups share a common one. Furthermore, we shall test whether or not Horror Vacui holds any bearing in their perception of beauty.

Perspectives in Judging Beauty

The question on “what is beauty?” has been debated for at least 2,500 years and has been given a wide variety of answers. However, one can broadly distinguish three main positions: First, an objectivist view which inspired many psychological attempts to identify the critical contributors to beauty. Among the identified features were balance and proportion, symmetry, informational content and complexity, contrast and clarity [Reber, Schwarz & Winkielman 2004]. The objectivist view of beauty was so dominant in the 16th century that artists introduced pattern books, offering pictorial elements that artists could copy and combine with each other to create beauty [Gombrich 1995].

Other theorists, dating back at least to the Sophists, proposed that anything could be beautiful if it pleases the senses [Tatarkiewicz, 1970]. From this second perspective, beauty is a function of idiosyncratic qualities of the perceiver and all efforts to identify the laws of beauty are futile. This subjectivist view, reflected in expressions like “beauty is in the eye of the beholder” underlies the social constructivist emphasis on the historically changing and culturally relative nature of beauty [Kubovy, 2000].

^{*} A subject in the UP Open University Master of Development Program

Most modern philosophical analyses reject the objective versus subjective dimension. Instead, they suggest that a sense of beauty emerges from patterns in the way people and objects relate. Reber, Schwarz & Winkielman propose an adoption of a third, *interactionist* perspective where aesthetic experience is a function of the perceiver's processing dynamics: the more fluent the perceiver can process an object, the more positive his or her aesthetic response.

Their theory entails four specific assumptions: First, objects differ in the fluency with which they can be processed. Second, processing fluency is itself hedonically marked and high fluency is subjectively experienced as positive. Third, processing fluency feeds into judgments of aesthetic appreciation because people draw on their subjective experience in making evaluative judgments. Fourth, the impact of fluency is moderated by expectations and attribution.

The Concept of Processing Fluency

The processing of any stimulus can be characterized by a variety of parameters that are non-specific to its content, such as speed and accuracy of stimulus processing. These parameters tend to lead to a common experience of processing ease or "fluency". A large number of studies show that people draw on fluency to make a variety of non-aesthetic judgments, including judgments of loudness, clarity, duration, familiarity, and even truth [Reber, Schwarz & Winkielman 2004].

Although fluency may characterize mental processes occurring at various levels, our concept is concerned with *perceptual fluency* (i.e. the ease of identifying the physical identity of the stimulus). It also applies to *conceptual fluency*, or the ease of mental operations concerned with stimulus meaning and its relation to semantic knowledge structures. The general term *processing fluency* is used to capture these commonalities. Furthermore, high fluency is considered to elicit positive affect because it is associated with progress toward successful recognition of the stimulus, error-free processing, or the availability of appropriate knowledge structures to interpret the stimulus [Reber, Schwarz & Winkielman 2004]. High fluency may also feel good because it signals that an external stimulus is familiar, and thus unlikely to be harmful [Zajonc 1968].

Amount of Information

For this study, we dwell on just one objective feature of the stimulus: The amount of information. The idea that the amount of information is an important determinant of beauty has a long history in aesthetics [Gombrich 1984]. In psychology, relevant research has mostly been conducted in the Gestalt tradition which is consistent with the traditional assumption that beauty resides in the object. Early researchers focused on stimulus organization and proposed that perceived “goodness” of the stimulus depends on the relation between stimulus organization and psychological mechanisms [Koffka 1935]. In their view, stimuli isomorphic or physiological mechanisms are easy to process and rated as “good figures”. Reber, Schwarz & Winkielman also concur that stimuli with less information are not only more pleasing but also easier to process, and that controlling the amount of information should reveal a preference for easy-to-process stimuli.

The Simple Stimuli: Minimalist designs

Minimalism in art & design sets out to expose the essence, essentials or identity of a subject through eliminating all non-essential forms, features or concepts. It is commonly defined by its judicious use of white space [Bondelid 2011, Chapman 2010]. Also called negative space and not necessarily white, white space is the portion of a page left unmarked and is considered a key to aesthetic composition as it allows faster processing of information through the following [Bondelid, Inchauste 2010]:

- Alleviates information overload and gives space for the eye to rest
- Indicates informational hierarchy (or the location, movement, importance and relationship between objects)
- Provides visual cue on breaks in content
- Improves overall legibility of content by separating information into consumable chunks
- Makes layout easier to navigate
- Gives focus and emphasis to an object

The credence of minimalist designs is also validated by international design competitions (Figures 1-3).



Figure 1. Winner for Print and Poster category in the New York International Advertising Awards: Cat, Dog & Duck by Rosetta Stone. Retrieved December 2012 from: <http://www.newyorkfestivals.com/worldsbest/index.php>

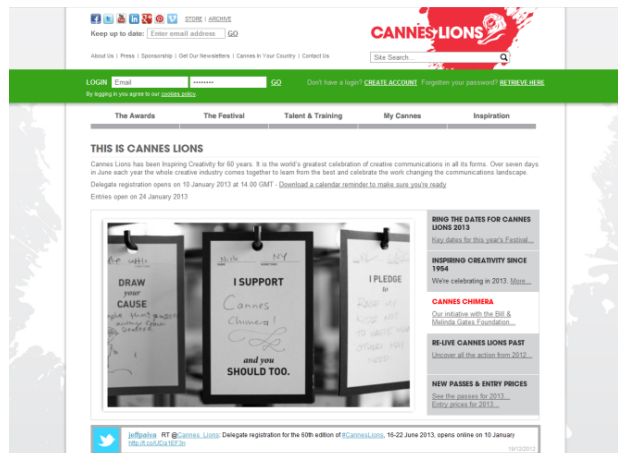


Figure 2. Website design of the Cannes Lions International Festival of Creativity. Formerly known as the International Advertising Festival, it is considered as the largest gathering of worldwide advertising professionals, designers, digital innovators and marketers.



Figure 3. Winner of the European festival of creativity: Ray-ban Legends Collection for the Print category. Retrieved December 2012 from: <http://www.eurobest.com/winners/2012/craftprint/>

The Complex Stimuli: Horror Vacui designs

Horror vacui is a Latin expression which means “fear of emptiness” and is principally used to describe a style of art and design that leaves no empty space [Butler et al. 2010]. It expands on Aristotle's theory that nature abhors a vacuum, and therefore empty space will always try to fill itself with a gas or liquid to avoid being empty. Horror vacui art has been practiced by ancient Greek and Islamic artists, and was even evident among the many indigenous tribes of Central and South America. However, the term was only coined during the 20th century when the Italian art critic and scholar, Mario Praz, used the term to describe the suffocating atmosphere and clutter of Victorian Age interior design [Butler et al. 2010].



Figure 4. Example of Victorian interior design exhibiting properties of horror vacui. Retrieved December 2012 from www.google.com

In the context of print design, there are two opposing processes at work in creating a layout: the intention to offer the highest signal-to-noise ratio, and an unconscious tendency called *horror vacui*. *Signal-to-noise ratio* is defined as the ratio of relevant (signal) to irrelevant information (noise) in a display and that the highest possible signal-to-noise ratio is desirable in design— i.e. aim for clearer content and less clutter. At the other end of the spectrum, *horror vacui* leads to crammed layouts full of text and superfluous ornamentation [Bondelid 2011]. It employs the excessive use of primary colors, florid shapes, the eclectic intermingling of styles, and giddy use of space which is typically difficult to read [Chapman 2010] and in this case, have the tendency for low fluency.

Simple vs. Complex

One challenge in the fluency account is why people sometimes prefer complex over simple stimuli. After all, a simple stimulus should be easier to process than a complex stimulus. The following discuss several processes that may contribute to a relative preference for complexity:

a. Perceiver's history with the stimulus

Reber, Schwarz & Winkielman believe that knowledge of the objective features per se is not sufficient to predict an object's evaluation. Psychological research on factors underlying beauty has also investigated the history of a perceiver's experience with the stimulus. One factor is the role of repeated exposure. Repeated exposure to a stimulus results in more favorable evaluations, a phenomenon known as *mere exposure effect* [Zajonc 1968]. Previously seen stimuli differ from novel stimuli with regard to at least three fluency-related parameters. First, familiar stimuli are processed faster than novel stimuli. Second, familiar stimuli elicit less attention orienting than novel stimuli. Third, familiar stimuli have more organized processing dynamics than novel stimuli [Reber, Schwarz & Winkielman 2004].

b. Objective simplicity versus cognitive ease

Objectively simpler stimuli are not always easier on the cognitive system. In the visual domain, complex shapes often have higher redundancy and thus are recognized faster than simpler shapes [Biederman, Hilton & Hummel 1991].

c. Perceptual versus conceptual fluency

Complexity may sometimes be preferred because it facilitates access to the meaning of the stimulus. That is, a decrease in perceptual fluency due to complexity may be outweighed by an increase in conceptual fluency due to meaningfulness. Consistent with this idea, Martindale, Moore and Borkum [1990] found that meaningfulness was a better predictor of aesthetic preference than complexity per se.

The Meaning in Horror Vacui

Horror vacui is attributed as a Filipino design character due to the following:

- The Filipino concept of causality and synchronistic principle of harmony with nature (or sympathetic causality). For example, Filipinos believe that what a woman craves during her pregnancy will have an effect on her child. This primitive belief that what occurs in the image will also occur in reality [Mercado 1994] suggests abundance in design will cause abundance in reality.
- Belief that space which is not filled may imply lack and deprivation [Guillermo 1986]. An empty space is viewed as a sign of poverty by the Filipinos and its opposite, the abundance of decorative motifs, expresses the festive, warmth and their munificence.
- Horror vacui is the abhorrence of the solitary, of segregation, and the feeling of alienation.
- Horror vacui is corollary to the powerful Filipino concept of *sayang*, loosely translated into “What a waste” or “What a shame”. Filipinos fill up space because they think unused empty space is *sayang* [Tan 2008].

Horror vacui, then, is not a fear of space itself, but a fear of what space represents: poverty, deprivation [Tan 2008], isolation, and waste. Figure 5 shows examples of Horror vacui in Philippine visual media.



Figure 5. Examples of Philippine Horror Vacui. Retrieved December 2012 from www.google.com

The Influence of Taste Culture

If horror vacui is a Filipino design character, why then is it observed to be more present in spheres of lower-income groups?

Individuals very often follow taste conventions that are, to a certain extent, driven by inherited cultural values, such as ethnic and religious aspects, or social class [Hoyer & Stokburger-Sauer 2011]. Pierre Bourdieu [1979] argues that tastes –the manifest cultural preferences of individuals, groups, and social classes— cannot be understood in isolation, independent of class relations and social hierarchies. In his view, societies are divided both by class (into strata) and field (competitive arenas). The precise social location of individuals and families within the matrix of society is determined by the amounts and types of capital they possess. Economic capital is the most important differentiator, because

conventional wealth can ultimately be converted into other forms of capital—cultural, social, and symbolic. Tastes stem not from internally generated aesthetic preferences, but from the conditioning effect of the habitus (or the ingrained dispositions that lead actors to make choices and decisions that reproduce existing social structures and status distinctions) and the availability of economic and cultural capital [Havey, Press & Maclean 2011].

In spite of appearances, taste is a cultivated rather than an innate disposition. In a society divided into antagonistic classes and class fractions, class membership determines both the position of actors in social space and the perceptual framework through which they make sense of their world. Since members of the dominant class experience few material constraints in everyday life, their aesthetic outlook reflects an attitude of detachment, an appreciation for abstract ideas, and a concern for formal properties of objects. Distance from economic necessity imposes a style of life and a legitimate way of perceiving the world. By virtue of its closeness to material constraints, popular culture is oriented towards the practical and functional [Olliver & Fridman 2001]. Thus, clusters of cultural forms which embody similar values and aesthetic standards, or *taste cultures*, are created [Olliver & Fridman 2001] which can be a good indicator of an individual's aesthetic preference [Holt 1998].

According to psychological theory, horror vacui is also a human instinct. People show an instinctive reaction towards voids by decorating them, by filling up the gaps. The civilization theory of Norbert Elias [1982] describes several domains in which the civilization process changes human behavior, all being some restraints on the human instincts or lusts: eating (with knife and fork), sleeping (not naked), spitting, personal hygiene [Elias 1978]. One of the most striking results from his study was the stratified division of self-control. New forms of self-control originate first in higher classes and descend slowly into the lower classes. Self-constraints are instruments with which the higher class confirms its superiority [Elias 1982]. If we follow Elias' theory, it must be so that the natural urge to fill in empty spaces is controlled by the civilizing process. If this is true, the higher classes will develop some sort of *amor vacui*. The "empty" becomes a sign of cultivation and good taste [Mortelmans 2005].

Also, recent research into how horror vacui is perceived suggests a general inverse relationship between horror vacui and value perception—that is, as horror vacui increases, perceived value decreases... because for those accustomed to having more, less is more, and for those accustomed to having less, more is more [Butler et al. 2010]. Within hierarchal social structures based on wealth then,

taste formation is an exclusively top-down process that condemns the lower orders perennially to be out of fashion [Harvey, Press & Maclean 2011], making horror vacui the flipside of legitimate taste and confining it within the symbolic boundary of low-income groups.

From Capital to Preference

With all things considered, it can be said that the perceiver's economic capital dictates his cultural capital and his inclusion in a specific taste culture. These shape the perceiver, which interacts with the objective properties of visual stimuli to create processing experiences that ultimately define beauty [Figure 6].

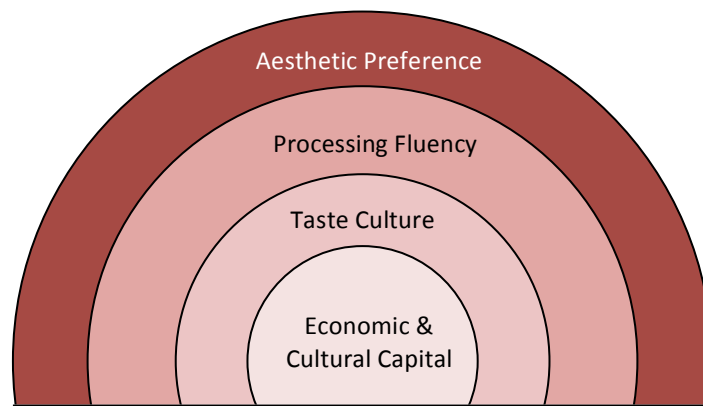


Figure 6. Theoretical Framework

We will reveal which between minimalism and horror vacui yields a more positive response from low-income audiences, and answer why horror vacui does or does not aid in processing fluency in print media.

METHODOLOGY

To validate economic capital as a determining factor in shaping preferences, two diverse types of low-income groups were surveyed: Metro & Rural. Aside from nationality, the only commonality between these 2 groups is their low-income status (minimum or below minimum wage earners).

The Metro respondents comprise 68% of the field crew of HDI Stopovers (one of the top outdoor advertising companies in Metro Manila). They are chosen for their direct exposure to a broad range (minimalist to horror vacui) of advertising designs since they regularly install advertising material in almost all major Metro Manila thoroughfares. All have some access to the Internet, cable TV, and have travelled abroad (Singapore) within the past year. The survey was administered in Filipino to 15 male respondents.

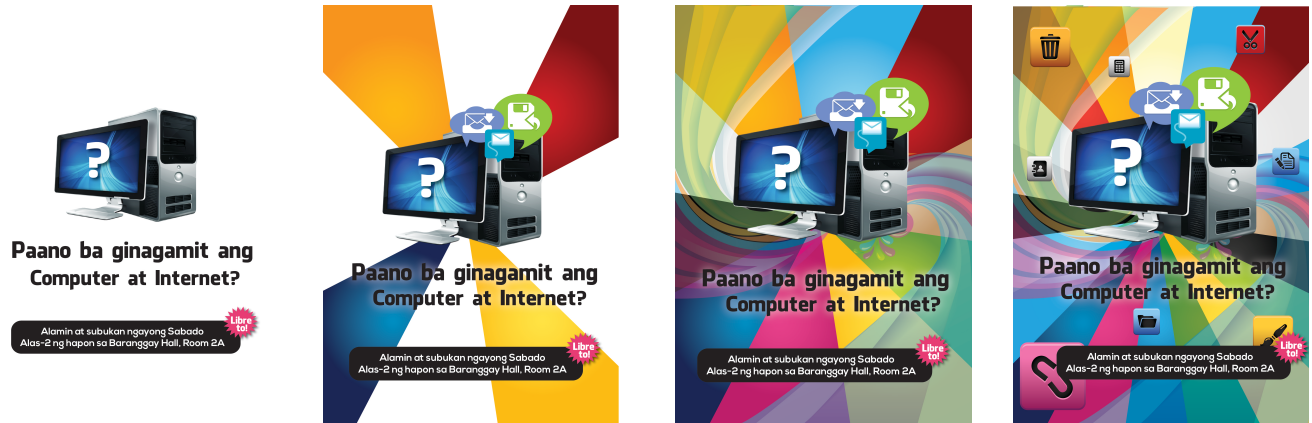
The Rural respondents are banana plantation and poultry farm workers from Barangay Tibuloy, Davao City. With almost no access to the Internet, cable TV, periodicals, outdoor advertising, or even interaction with affluent people, their exposure to design trends can be considered little or none at all. The survey was administered in Visayan to 8 female and 7 male respondents.

Quantitative Research Method

Respondents were exposed to 4 versions of a poster: Minimalist, 200%, 300% and Horror vacui. The increase in percentage signifies how much the number of elements/covered area is multiplied compared to their minimalist counterpart (at 100%). The elements added in each succeeding version were based on Chapman’s (2010) definition of horror vacui. All design versions contained identical messaging.

Table 1. Poster Contents

Version	Contents
Minimalist (100%)	Standard text, 0 colored rays, no callouts, image at 100% magnification, no swirl, no icons
200%	Standard text, 4 colored rays, 3 callouts, image at 110% magnification, no swirl, no icons
300%	Standard text, 10 colored rays, 3 callouts, image at 120% magnification, with swirl, no icons
Horror Vacui (400%)	Standard text (in 2 font styles), 20 colored rays, 3 callouts, image at 130% magnification, with swirl, 8 icons



Figures 7. The survey instrument. From Left to Right: Minimalist, 200%, 300% Horror Vacui.

Respondents were oriented to judge the poster design and not the message, and then showed one version at a time, starting with the minimalist version. They were then asked to rate, via a questionnaire using a 5-point scale, each poster's general appeal, value of appearance, readability, and credibility. For control, another group rated using a reverse sequence, beginning with the Horror Vacui (400%) version. Rating was done individually and respondents were not allowed to change their answers.

To prevent the *mere exposure effect*, the first poster of each sequence was shown at x seconds (to have enough time to read the text for the first time) and succeeding posters at $x/2$ seconds (since the text no longer required re-reading). The questionnaires were all written in Filipino. Age, income, and education statistics were also documented.

Since Metro subjects had scheduling issues, there were more respondents for the regular sequence than the reverse. For Metro subjects, 73% were first shown the Minimalist version while 27% rated via reverse sequence (From 400% to 100%). For rural subjects, 47% rated via regular sequence and 53% via the reverse.

Qualitative Research Method

After rating all 4 posters separately, all were presented (side-by-side) together and the respondents were asked to pick only their favorite and explain why. Answers were given in front of the group. To

prevent the *conformity effect*, they were told that there were no right or wrong answers. Nonetheless, some conformism/ conscious non-conformism was observed.

RESULTS

Respondent Demographics

Age:	Highest Educational Attainment:	Monthly income:
Range: 19 – 58	Elementary – 13%	Below minimum wage – 57%
Mean: 33	High School – 77%	Minimum wage Region XI– 10%
Median: 31	Vocational – 10%	Minimum wage NCR – 33%
Mode: 25		

Gender:
 Male - 73%
 Female - 27%

General Aesthetic Response

In all aspects, the Horror Vacui design is rated higher compared to its minimalist counterpart and all other versions [Table 2]. For Rural subjects, the overall rating consistently increased as more elements were introduced into the design.

Table 2. Aesthetic Response according to respondent type

	Minimalist (100%)		200%		300%		Horror Vacui (400%)	
	Metro (M)	Rural (RU)	M	RU	M	RU	M	RU
Appeal	3.93	3.40	3.87	3.80	4.33	4.47	4.80	4.87
Value	3.60	3.47	4.00	4.20	3.93	4.20	4.47	5.00
Readability	3.93	3.67	3.87	4.20	3.87	4.47	4.53	4.87
Credibility	3.67	3.47	3.53	4.20	3.87	4.73	4.47	5.00

*Based on a 5-point scale with 5 as highly positive and 1 as highly negative. Shown above are mean scores.

Respondents tend to rate the first design they see highly [Table 3]. For Metro subjects who mostly rated via regular sequence, the 200% version got mostly lower scores compared to the minimalist version, but the positive trend towards Horror Vacui resumes at the 300% design. Those who rated via reverse sequence gave significantly lower scores for the minimalist design than those who rated via the regular sequence.

Table 3. Aesthetic response according to survey sequence

	Minimalist (100%)		200%		300%		Horror Vacui (400%)	
	Regular (+)	Reverse (-)	+	-	+	-	+	-
Appeal	4.67	2.17	4.61	2.67	4.78	3.83	4.94	4.67
Value	4.17	2.58	4.39	3.67	4.39	3.58	4.72	4.75
Readability	4.39	2.92	4.44	3.42	4.33	3.92	4.56	4.92
Credibility	3.83	3.17	3.89	3.83	4.39	4.17	4.67	4.83

*Based on a 5-point scale with 5 as highly positive and 1 as highly negative. Shown above are mean scores.

In both tables, value & readability’s rating decreases/stagnates from 200% to 300%. Twenty three to thirty seven percent (23%-37%) of respondents also showed **no change** in rating across design aspects (i.e. a respondent who rated Appeal as 5 across all 4 posters).

Why horror vacui

Figure 8 summarizes how the Horror Vacui design is comparable to the other designs. Here, when it garnered the highest (or one of the highest) rating among all 4 posters, it is rated positively. If there is no change in ratings, it is rated as neutral. When any of the 100%-300% designs score better than the Horror Vacui version, it is rated negatively.

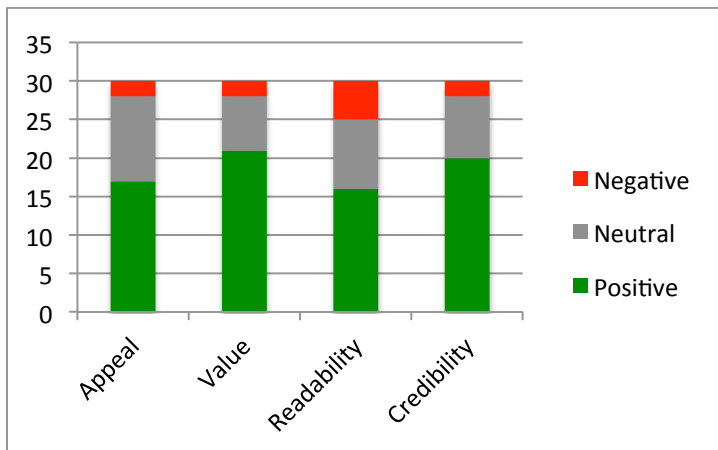


Figure 8. Horror Vacui comparable rating

Value (looks classy, not cheap) and credibility (looks credible, not dubious) are the highest-ranking aspects that make the horror vacui design more aesthetically pleasing for the respondents. Readability (is clear, not confusing) suffers the most in horror vacui designs.

When asked to choose only 1 design, majority of the respondents (67%) chose the horror vacui design and only 10% chose the minimalist version, based on the following reasons [Tables 4]:

Table 4.1 Metro subjects preference reasons

Design	% of respondents	Reasons
100%	6%	That [Horror vacui] design looks expensive and I can only afford this [minimalist version]
200%	0%	-
300%	27%	The [amount of] content is just right -50% [Horror vacui] is too much/has too many thing going on -50%
400%	67%	Has more [content, color] -50% Is complete - 40% Looks newer; the others look dull -10%

Table 4.2 Rural subjects preference reasons

Design	% of respondents	Reasons
100%	13%	Is simple, just like me – 50% Is simple & looks cheap— something I can afford – 50%
200%	7%	Is simple
300%	13%	Is simple
400%	67%	Is complete – 50% Looks beautiful – 20% Looks high-tech 20% Has more – 10%

When asked to pinpoint which particular element they were most attracted to, all were unable to identify and just said that it is the ‘completeness’ of the design that they like (at this stage, they could already see all 4 designs and the amount of elements added into the horror vacui design). When asked leading questions (Is it the colors that you like? Is it the icons?), most respondents just agreed. When asked questions that excluded other elements (Is it *only* the callouts that you like and not the color?), most would disagree and revert to their original answer that it is the ‘completeness’, ‘abundance’, or aggregate effect of all elements that they found aesthetically pleasing.

Completeness (30% overall) and abundance (20% overall) of the design are the top reasons why the horror vacui design was selected. When asked why they do **not** prefer the minimalist design, the common answers were: it is lacking or boring/dull.

DISCUSSION

The difference between aesthetic responses in Tables 2 & 3 is due to respondents' propensity to give high initial ratings. From observation and since they have no idea how succeeding designs would look, it appears the subjects do not want to offend the researcher by initially rating too low. This explains why the 200% design for Metro subjects is generally rated lower than the 100% minimalist version as the latter was rated generously. The drastic drop in the 100% minimalist version's rating via the reverse sequence (on both subjects) validates this phenomenon. This is parallel to Heikkila's (2011) report that even if lower-status groups are often silent on discussing issues on taste, they are willing to enumerate (in this case, rate) things they dislike. Those who rated via reverse sequence were allowed more room to express their dislike for the minimalist version compared to those who rated via regular sequence. Also, Reber and colleagues discussed a possible moderating effect of expectation of fluency and suggested that the fluency effect is likely to generate a pleasurable experience when unexpected in the context. For example, when a person finds a classmate in a classroom (expected fluency) he would not feel the face is as pleasant or familiar compared to when he finds the classmate in a summer vacation destination (unexpected fluency. Im et.al. 2010). The 'surprise' from the initial poster would likely result in increased fluency.

Why Horror Vacui over Minimalism?

The answer partly lies in those who chose minimalism as their favorite. For reasons stated in Tables 4, low-income subjects are conscious of their economic standing and factor it in their evaluative functions regarding taste. Whether they believe horror vacui to be the classier or cheaper design, they picked it since they perceive it to be more appropriate for their (low) class. This corroborates Bourdieu's image of the working-class taste— a desire for modest simplicity and disdain for the pretentious and gaudy tastes, which are linked to upper classes.

Horror Vacui in Processing Fluency

Horror vacui's overall positive aesthetic response is largely attributed to the increase in conceptual fluency due to meaningfulness: horror vacui represents completeness and abundance.

When the posters were revealed one after another from minimalist to horror vacui and vice versa, it created a trend of addition/subtraction of elements. Comparing the 4 designs side-by-side during the interview also emphasized what the minimalist version lacked and what was complete with horror vacui.

Consistent with Guillermo (1986), minimalism for low-income groups symbolizes deprivation, which garnered the lowest value scores, and horror vacui with munificence, which garnered the highest value scores. Here, the economic value of the object (or degree of classiness or cheapness) is directly linked to the abundance of its elements. We further suggest a second correlation where perceived value dictates perceived credibility. This relationship is seen when credibility achieved the 2nd most positive rating in horror vacui and the exact opposite for minimalism.

However, even if conceptual fluency here has proven to be more influential in aesthetic judgments than perceptual fluency, the subjects were still conscious of the low signal-to-noise ratio, which shows in horror vacui's increase in negative ratings for readability. This is most observed in the 200% to 300% comparison and explains why 20% (overall) of respondents chose the 300% version since the horror vacui design just had 'too many things going on'.

Communication implications

A research into horror vacui that states that as horror vacui increases, perceived value decreases (Butler 2010) does not hold true for low-income groups, which shows the opposite. For those accustomed with less, more *is* more.

When developing print communication materials for low-income groups, it is still advisable to use the techniques that make a horror vacui design (vs. minimalist): the excessive use of primary colors, florid shapes, the eclectic intermingling of styles, and giddy use of space; albeit be more mindful in ensuring readability. Allocating the available white spaces to text and allowing horror vacui to dominate only the visuals may solve this.

Limitations and recommendations

Other contributors to perceptual fluency (contrast, sharpness, balance, symmetry, and other stimulus properties) that aid in processing fluency were present in the designs yet excluded from the study. We recommend future research in those areas as well as those that measure if the (non-) preference of horror vacui extends across various economic classes. Discussions on culture/taste tend to be difficult for low-income groups, thus a structured focus group is suggested for qualitative research over informal interviews.

CONCLUSION

How should we design print media for low-income groups? Do we follow the international minimalist design standards? With 83% of information ingested through sight and the human propensity to perceive attractive things as more acceptable, development communicators need to understand how to design communication materials to elicit more positive aesthetic response, and by extension, better attention, from their audiences. Aesthetic preferences are shaped by the amount of economic capital a person has and we tested if low-income groups share a common one. We also measured how much of it is influenced by the excessive amount of information on the stimuli (horror vacui).

Results show that low-income workers from diverse backgrounds share identical tastes in print media and perceived horror vacui designs to have higher appeal, value, readability and credibility than their minimalist counterparts.

Horror vacui designs are more attractive for them as they exhibit higher processing fluency due to meaningfulness— the increase in the amount of information in horror vacui symbolizes completeness or abundance, contrary to minimalism's implication of lack & deprivation. When developing print communication materials for low-income groups, the excessive use of primary colors, florid shapes, the eclectic intermingling of styles, and giddy use of space are recommended for visuals.

Future research is suggested in other contributors to perceptual fluency excluded from this study (contrast, sharpness, and other stimulus properties) as well as those that measure if the (non-) preference of horror vacui extends across various economic classes.

BIBLIOGRAPHY

- Arsel, Z. & Bean, J. (2013). "Taste Regimes and Market-Mediated Practice". *Journal of Consumer Research*. Volume 39. 899-917.
- Beiderman, I., Hilton, H.J., Hummel, J.E. (1991). Pattern goodness and pattern recognition. In J.R. Pomerantz & G.R. Lockhead (Eds.), *The perception of structure*. Pp. 73-95. Washington, D.C.
- Bondelid, M. (2011) "When less really is more". Retrieved December 2012 from: http://www.lindsaycommunications.com/articles/Default.aspx?article_id=3
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste*. London: Routledge.
- Butler, J., et.al. (2010). *Universal Principles of Design, Revised and Updated: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design*. 2nd Ed. Rockport Publishers. pp.20, 128.
- Chapman, C. (2010) "Principles of Minimalist Web Design, With Examples". Retrieved December 2012 from <http://www.smashingmagazine.com/2010/05/13/principles-of-minimalist-web-design-with-examples/22-24>
- Elias, N. (1978) *The Civilizing Process. The History of Manners*. Oxford: Basil Blackwell.
- Elias, N. (1982) *The Civilizing Process. State Formation and Civilization*. Oxford: Basil Blackwell.
- Gombrich, E.H. (1984). A sense of order. 2nd ed. London: Phaidon.
- Gombrich, E.H. (1995). *The Story of Art*. 16th ed. London: Phaidon.
- Guillermo, A. (1986) "The Filipino World-View in the Visual Arts". *Philippine World View*, ed. by Virgilio G. Enriquez Singapore: Institute of Southeast Asian Studies. p. 56.
- Harvey, C., Press, J., Maclean, M. (2011) "William Morris, Cultural Leadership, and the Dynamics of Taste". *Business History Review* 85. Pp.245-271.
- Heikkila, R. (2011). "Matters of Taste? Conceptions of Good and Bad Taste in Focus Groups with Swedish-speaking Finns". *European Journal of Cultural Studies*. Retrieved July 18, 2013 from <http://www.ecs.sagepub.com> thru Ateneo de Manila University.
- Holbrook, M. (2005). The role of ordinary evaluations in the market for popular culture: do consumers have "good taste"? *Marketing Letters*, 16, 75-86.
- Hennion, A. (2007). "Those Things That Hold Us Together: Taste and Sociology." *Cultural Sociology*. Vol. 1, No. 1, 97-114. London: Sage.
- Holbrook, M. (1983) Product Imagery and the Illusion of Reality: some insights from Consumer Esthetics. *Advances in Consumer Research*, 10(1), 65-71.
- Holt, D. (1998) Does Cultural Capital Structure American Consumption? *Journal of Consumer Research*, 25, 1-25.

Hoyer, W. & Stokburger-Sauer, N. (2011) "The Role of Aesthetic Taste in Consumer Behavior". *Academy of Marketing Science*. Retrieved December 2012 from: www.mcombs.utexas.edu

Im, H., Lennon, S., Stoel, L. (2010). "The Perceptual Fluency Effect on Pleasurable Online Shopping Experience". *Journal of Research in Interactive Marketing*. Vol. 4 No.4, pp. 280-295.

Inchauste, F. (2010) "A Negative View of White Space". Retrieved December 2012 from: http://www.getfinch.com/2010/01/a_negative_view_of_white_space/

Julsitos. (2012) "A Critique on Philippine Komiks Art". Retrieved December 2012 from: <http://idiotboard.blogspot.com/2012/10/a-critique-on-philippine-komiks-art.html>

Katz-Gerro, T., Yaish, M. No date. "Cultural Capital: Between Taste and Participation". University of Haifa. Retrieved December 6, 2013 from http://csr.n.camden.rutgers.edu/pdf/9-2_katz.pdf.

Koffka, K. (1935). *Principles of Gestalt psychology*. London: Routledge & Kegan Paul.

Kubovy, M. (2000). Visual aesthetics. In A.E. Kazdin (ed.), *Encyclopedia of psychology*. Vol 8. Pp. 188-193. New York. Oxford University Press.

Martindale, C., Moore, K., Borkum, J. (1990). Aesthetic preference: Anomalous findings for Berlyne's psychobiological theory. *American Journal of Psychology*, 103. Pp.53-80.

Mercado, L. (1976) *Elements of Filipino Philosophy*. pp. 131-141.

Mercado, L. (1994). *The Filipino Mind*. Cultural Heritage and Contemporary Change. Series III Asia, Volume 8. USA: The Council of Research in Values and Philosophy. pp. 178-179.

Mortelmans, D. (2005). Visualizing Emptiness. *Visual Anthropology*. Volume 18, Number 1. Routledge, part of the Taylor & Francis Group pp.19-45.

Ollivier, M. & Fridman, V. (2001). "Taste/Taste Culture". *International Encyclopedia of the Social and Behavioral Sciences*. Retrieved December 2012 from: <http://educ.jmu.edu/~brysonbp/symbound/papers2001/Olivier.html>

Reber, R., Winkielman, P., Schwarz, N. (1998). "Research Report: Effects of Perceptual Fluency on Affective Judgements". *American Psychological Society*. Volume 9. No. 1.

Reber, R., Schwarz, N., Winkielman, P. (2004). "Processing Fluency and Aesthetic Pleasure: Is Beauty in the Perceiver's Processing Experience?" *Personality and Social Psychology Review*. Vol. 8, No. 4. Pp.364-382.

Rosenblum, L. (2010). *See What I'm Saying: The Extraordinary Powers of our Five Senses*. 1st ed. W.W. Norton & Company.

Tan, M. (2008) "Life And Style: Horror Vacui". Retrieved December 2012 from: <http://www.mysin Chew.com/node/18457>

Tatarkiewicz, W. (1970). *History of aesthetics*. The Hague, The Netherlands: Mouton.

Zajonc, R.B. (1968). "Attitudinal effects of mere exposure". *Journal of Personality and Social Psychology, Monograph Supplement 9*. p. 1-27.

Zafra, J. (1998) *Pen & Ink*. Issue 3. Retrieved December 2012 from http://books.google.com.ph/books?ei=A0zRUK-rFYmXiAfxmIH4Dg&id=WONZAAAAMAAJ&dq=horror+vacui+Filipino&q=horror+vacui+#search_anchor

Arts Monthly. Volumes 2-5. Cultural Center of the Philippines. 1982. pp.27 Retrieved December 2012 from: books.google.com.ph/books?id=zfcOQAAMAAJ

Budhi: A Journal of Ideas and Culture. Volume 7, Issues 1-2. Ateneo de Manila University, 2003. Retrieved December 2012 from: <http://books.google.com.ph/books?id=MmVMAQAIAAJ&q=horror+vacui+Filipino&dq=horror+vacui+Filipino&hl=en&sa=X&ei=gk7RUMuan4yiiAe1qIHYAQ&ved=0CF0Q6AEwCTgK>

"Filipino Style in Architecture: Is There Such A Thing?" Retrieved December 2012 from: <http://www.readbag.com/aboutphilippines-filer-filipino-style-in-architecture>

"Horror Vacui Art - An Introduction" Retrieved from: <http://www.squidoo.com/horror-vacui-art-artists>

"Minimalism (visual arts)". 2012. Retrieved December 2012 from: [http://en.wikipedia.org/wiki/Minimalism_\(visual_arts\)](http://en.wikipedia.org/wiki/Minimalism_(visual_arts))

Juxtapose. Issues 96-98. High Speed Productions 2009. Retrieved December 2012 from: <http://books.google.com.ph/books?id=LJBIAQAIAAJ&q=horror+vacui+Filipino&dq=horror+vacui+Filipino&hl=en&sa=X&ei=y1LRUJfYEqmtiAevpYDwDg&ved=0CD0Q6AEwAjgU>

"Taste Culture". Retrieved December 2012 from: <http://www.answers.com/topic/taste-culture#ixzz2FqoWbQpC>

"Taste (sociology)". 2012. Retrieved December 2012 from: [http://en.wikipedia.org/wiki/Taste_\(sociology\)](http://en.wikipedia.org/wiki/Taste_(sociology))

"White Space in Graphic Design and Why It's Important". Retrieved December 2012 from: <http://www.printwand.com/blog/white-space-in-graphic-design-and-why-its-important>

"White Space (visual arts)". 2012. Retrieved December 2012 from: [http://en.wikipedia.org/wiki/White_space_\(visual_arts\)](http://en.wikipedia.org/wiki/White_space_(visual_arts))