Photography and Classification of Information: Proposed Framework for Graffiti Art

David Novak

University of Malaya, Cultural Centre,
Level 2, Old Canseleri Building, 50603 Kuala Lumpur, Malaysia
graffitiartmalaysia@yahoo.com

Abstract

Street and urban creativity is a global phenomenon and graffiti art is one of its manifestations. This article briefly discusses some approaches to photography as to one of the main visual research methods in the research of graffiti art works. Moreover, a framework for the classification of information contained in photographs of graffiti art works is proposed. A three level system of classification is introduced based on a provided example.

Keywords: Photography, Graffiti, Framework, Classification, Indexing, Art

1.1 Introduction

The dynamic research field of 'Street and Urban Creativity' is very wide. This area includes various forms of expression ranging from performing arts to diverse visual forms of self-expression. One global and relatively unified, but also controversial, form of street and urban creativity (Ganz, 2004; Austin, 2010; Schacter, 2013) is represented in the form of graffiti art (Ganter, 2013).

Graffiti art is characterized by four visual forms (genres): tag, piece, throw-up and character. The roots of graffiti art are located in Philadelphia of the late 1960s (Ley and Cybriwsky, 1974) and in New York City of the early 1970s (Castleman, 1982; Stewart, 1989). This predominantly urban phenomenon started spreading to the rest of the world, from the East Coast of the USA, in the 1980s (Chalfant and Prigoff, 1987; Kramer, 2009).

This article discuses photography as one of the main research instruments in the study of the 'graffiti art' phenomenon. This visual method of investigation is extremely important in the graffiti art research, as graffiti art works are very ephemeral.[1] A photograph is mostly the solitary proof of existence of a graffiti art work, even though a photograph embodies 'only' a representation of a 'real' graffiti art work. Habitually graffiti art is painted over with new graffiti art or such works are whitewashed. We are able today to visually trace back the origins of the graffiti art culture, in New York City of the 1970s, only due to the matchless research of the teacher, artist and art historian Jack Stewart (1926–2005), who tirelessly and systematically photographed the developmental stages of graffiti art on the sides of subway trains (Stewart, 2009; Duncan, 2010). All early graffiti art from New York City of the 1970s-80s were "destroyed" by the Metropolitan Transit Authority, as was also remarked by the art historian Margo Thompson (2009: 7). These early pieces of graffiti art were destroyed, even though they represented a unique form of expression to tourists visiting New York (Chalfant and Prigoff, 1987: 7; Austin, 2001: 2-5). Photographs are still, till the present day, not only very important to the graffiti artists who produce them, (Snyder, 2006), but they are equally significant for researchers who make use of the "photo elicitation" research method (Snyder, 2009: 196). Nowadays it is profitable to make use of the available digital technology, which allows researchers to create their own photographic visual archives for research purposes.[2] Several suggestions on how to take optimal photographs of graffiti art are discussed in the next section 2.1.[3]

Further, this article proposes a supplementary three level classification system of the information from photographs of graffiti art (see section 3.1); this form of 'database' is an extension of the visual data contained in a graffiti art work. The proposed classification system of information aims to

provide a possible directional orientation for fellow research-ers in the data gathering process in regards to graffiti art. The framework is derived mainly from research conducted in the Information, Computer and Library sciences (Shatford, 1986; Layne, 1994; Berinstein, 1999; Jaimes and Chang, 2000; Jörgensen et al., 2001; Layne, 2002; Hixson, 2003; Hollink et al., 2004; Gottlieb, 2006). The classification system of infor-mation is profitable in particular to art historians, but also to other investigators studying the visual culture of graffiti art-ists. The proposed conceptual framework is specially cus-tomized for maximum impact in the data gathering process. The framework could provide international researchers with a unified approach towards graffiti art.[4] This suggested clas-sification system was developed based on my long personal experience in this specific up-and-coming research field, as there is a need for accurate and appropriate information in regard to graffiti art.

To conclude, this article discusses photography as one of the key research methods in graffiti art research. The ephem-eral nature of graffiti art conditions researchers to quickly acquire the 'right' image for their own research purposes. Techniques such as the stitching of photographs, incorpora-tion of scale or the taking of photographs with the correct audience in mind are highlighted. The conceptual frame-work, in regards to the classification system of information of graffiti art, is introduced and practically described, based on a specific example of a photograph.

2.1 Photography

Photography is one of the most powerful research tools for the visual exploration of the graffiti art culture. Photography should be consistently used in graffiti art research, as graffiti art is a visual art form. Nowadays, the storing of photographs is easy, because of the availability of modern information technologies. For researchers it is of the most importance and advantage to be able to repeatedly take photographs of graffiti art and the urban environments where the graffiti appears. Photographs can be conveniently stored in a digital research archive. These photographs provide a researcher with plentiful visual information for future evaluation, as graf-fiti art is a very ephemeral form of expression. Graffiti art and the urban environment changes over time and the knowl-edge of a researcher concerning the graffiti art culture grows with time. With an extensive research archive at hand – con-taining several hundreds or thousands of photographs – a

researcher can in the future formulate new hypotheses and conclusions.

The photography of graffiti art is very useful especially for art students. I personally shot thousands of digital photographs of graffiti art throughout my own research. This number also includes hundreds of images of the urban landscape that harvests graffiti art works, as the urban landscape is the 'canvas' of graffiti artists.

It needs to be stated that in the hands of the researcher, pho-tography represents a very powerful tool, as the researcher often influences the presentation of his research through photographs. It is important to always bear in mind that the representation of graffiti art is always contextual to its envi-ronment, as graffiti art is a site-specific art form (see Figs. 1–4). Compare for example the possible presentation of the graffiti art within the graffiti art productions in Figs. 1–6. In Figs. 1–6, it is demonstrated that a particular piece can be presented from different viewpoints ranging from general to detailed. For research purposes related to visual arts the presentation in Fig. 4 would be the most appropriate one. However, for urban space researchers Fig. 1 would be more fitting. Sociologists as well as art historians might also be interested in the production process of graffiti art. Such a graffiti art production is shown in Fig. 5–6, whereby a re-searcher takes parallel images of the location where a graffiti art work is being produced and later stiches these photo-graphs together in a computer graphic software environment (Fig. 5). The angle for taking photographs is important as it influences the final stitched photograph, as is shown in Figs. 5–6, where one stitched image was taken parallel to the wall (Fig. 5) and another sideways from the same spot (Fig. 6).

To sum up, photography is a very important method for graf-fiti art research, although there is room for improvement in the data gathering process. This is shown in the subsequent subsection 3.1, which discusses the possibility of adding in-formation to a photograph of a piece of a graffiti art work.

3.1 Classification of Information: Suggested Framework for Graffiti Art

The photography of graffiti art is typically the only way a graffiti art work is preserved and also therefore, images of graffiti art represent the most valuable resource for the research community. However, a photograph of graffiti art contains much more information than only the representa-tion. Information contained in an image can be, and should

be, systematically classified. Such accumulated and classified information represents an invaluable data research archive for further inquiry. My continuous work with my own research archive showed that there is much more information contained in the photographs of graffiti art than I made use of. This realization lead to the formulation of a possible framework, which is derived from the very progressive field of information technologies (Hollink, Schreiber, Wielinga and Worring, 2004). As graffiti art has its own specifics the framework proposed here is not strictly following the computer and library sciences classification systems.

The classification system introduced and presented here has the potential for adjustments, in regards to the needs of an individual researcher or a research institute, but can be readily used as it is. The framework is based on the following three-level approach to an image of a graffiti art work: Bio and nonvisual data, Visual characteristics, and Description (see framework structure in Figs. 8–10). An example of this introduced framework is provided in Tables 1–3, based on the photograph in Fig. 7.[5]

All the introduced classification categories of information are derived from a single photograph, after sufficient knowledge of a local or global graffiti art work and graffiti art culture is obtained by the researcher. Such accumulated and reliable data can be perfectly used for quantitative analysis by the use of statistical methods.

3.1.1 Bio and nonvisual data

The suggested three-level framework starts with the 'Bio and nonvisual data' level, represented in its structure in Fig. 8. This level contains the categories Known title, Event, Author/-s, Date of Production, Country, Width and Height, Longevity till, Costs, Surface and Photographer, which are subsequently explained and described.

'Known title' of a work – if identified, obtained from interviews or obvious from a description in the work itself. The name of an 'Event', where the particular work was produced. This can be a jam or a competition, which would be an 'Official' event or the work could have been also produced as a 'Spontaneous' act. Further, a work has its 'Author/-s', who might be affiliated with a 'Crew' or the crew itself might have authored a work. A work can be due to such a fact, or due to other facts, produced on a 'Collaboration' basis. Collaborative works are for example common in Malaysia (Novak, 2015). Author's 'Nationality' is of interest, as a piece of graffiti art could have been created by a local or by a visiting

graffiti artist from another city or country – 'Tourist/Visiting from'. If a researcher gathers photographic material during live painting sessions, the identification of the 'Date of Production', the 'Duration' – time of production of a graffiti art work and the 'Country', 'City', and 'Location' at which such a work was created is usually guaranteed. The researcher should at the same time be aware of the legal state-of-affairs during such a production. Therefore the researcher should possess the knowledge, if the author/-s had 'Permission' for the production of such a work and how significant was the actual 'Visibility' of the produced work at its location, as the examined work is a piece of graffiti art, that needs to primarily attract attention. The category 'Width and Height' is targeting an exact measurement of scale of graffiti art (Novak, 2014). If the exact measurements of a piece of graffiti art are not known, an 'Approximate' size of a work can be derived from the architectural structure's scale or from other hints in the photograph. 'Longevity till' shall present information about the longevity of a piece of graffiti art, as most graffiti is rather quickly removed or painted over. However, some graffiti art can be 'Preserved on' canvases, plywood boards and on other, rather mobile, surfaces – generally in public or private possession. Nevertheless, a currently completely lost (destroyed) piece of graffiti art was 'Painted over by' or 'Crossed by' another graffiti artist or the work was 'Buffed' by the authorities. 'Costs' category can indicate if a piece of graffiti art was 'Self' financed by a graffiti artist or if the work's production was financed by a 'Sponsor'. 'Surface' category refers to the properties of a canvas of a graffiti art work, as to a wall (mural), urban objects and to other surfaces, which can be 'Mobile' or 'Static'. The last class category in this level of classification is in determining the information about the 'Photographer' of a particular piece of graffiti art and about the date the image was taken – 'Date Taken'. Further, if the photograph was obtained from another 'Source', the source is listed.

Table 1: Bio and nonvisual data (see Fig. 7)

Known title:	x		
Event:	Kul Sign Festival 2012		
	Official:	Yes	
	Spontaneous:	x	
Author/-s:	SIEK, BONE		
	Crew:	PHBKLK, ZNC	
	Collaboration:	Yes (SIEK, BONE)	
	Nationality:	Malaysian	
		Tourist/Visiting from:	x
Date of production:	25 February 2012		
	Duration:	4 hours +	
Country:	Malaysia		
	City:	Kuala Lumpur	
	Location:	Riverbank at Pasar Seni LRT station	
		(Google Maps: 3.143514, 101.695202)	
		Permission:	Yes
		Visibility:	High
Width and height:	Height: 313 cm		
	Approximate:	x	
Longevity till:	Present (September 2014)		
	Preserved on:	Wall	
	Painted over by:	x	
	Crossed by:	x	
	Buffed:	x	
Costs:	Unknown		
	Self:	No	
	Sponsor:	Yes: Kul Sign Festival 2012	
Surface:	Concrete wall (mural)		
	Mobile:	No	
	Static:	Yes	
Alteration by:	x		
Photographer:	David Novak		
	Source:	Own research archive	
	Date taken:	26 February 2012	

3.1.1 Visual characteristics

'Visual characteristics' represent the second level of classification, as indicated in the structure in Fig. 9 and contains the following four main categories described subsequently – Coloring, Form, Segmentation in a photograph and View.

'Coloring' classifies the graffiti art in regards to a basic coloring scheme expressed in the categories 'Monochrome', 'Duotone' and 'Multicolored'. It is assumed that all photographs are in color (not in black-and-white) and this category refers therefore to the graffiti art itself and not to the photograph. 'Form' determines the represented graffiti art forms: 'Tag', 'Throw-up', 'Character' or 'Piece'. In addition, a graffiti art work could have been produced as a part of a 'Production', when at least two graffiti artists produce a larger work with a shared background. During a graffiti art production some of the participating graffiti artists often create certain, shared, visual elements – 'Elements by'. However, 'Segmentation in Photo' refers to the photograph of graffiti art itself. A photograph of graffiti art can represent the 'Full' graffiti art work or only its 'Part' and a photograph may represent a graffiti art work from a 'View' from the 'Front' or from an 'Angle'. A photograph could be also 'Stitched #' from various single photographs, which should be indicated as well. These details were discussed in section 2.1 above.

Table 2: Visual characteristics (see Fig. 7)

Coloring				
	Monochrome:	x		
	Duotone:	x		
	Multicolor:	Yes		
Form				
	Tag:	x		
	Throw-up:	x		
	Character:	(Yes)		
	Piece:	Yes [SIEK]		
		Production:	Yes	
			Elements by:	Character by BONE
Segmentation in photo:	No			
	Full:	Yes		
	Part:	x		
View				
	Front:	Yes		
	Angle:	x		
	Stitched #:	x		

3.1.1 Description

The third and final level of information classification in a photograph of graffiti art is 'Description'. The structure of this level is represented in Fig. 10. The structure in Fig. 10 contains the three main categories: Image elements, Object/Scene content and Media. These are subsequently explained and described.

The 'Image elements' category describes the actual content, subject matter of a graffiti art work represented in a photograph. This content is distributed among image elements 'Letterforms', 'Background' and, if present, a 'Character' or more characters. The letterforms represented in a graffiti art work need to be further correctly interpreted as 'Exact letterforms'. Subsequently, these letterforms, especially in pieces, should be assigned to a 'Style' specification.[6] The 'Design elements' description should contain other additional visual design elements in a letterform-oriented graffiti art work, such as bits, or cuts for example. Further, a letterform-oriented graffiti art work can feature substituted letterforms with characters.[7] This substitution of a letterform is quite common in pieces, as in Fig. 7, and should be, if present, listed in the section 'Substitute for'. The 'Background' of a graffiti art work can be either created or already present on a surface, which might not be clear for an observer of a photograph and therefore this fact should be stated in the category 'Created/Not'. The type of a background should be further described under 'What'. 'Character' is linked to the 'Object/Scene Content' class. A 'Generic object' or a 'Generic scene' is for example an 'apple, man, chair, city, landscape, indoor, outdoor, still life, and portrait'. A 'Specific object' or a 'Specific scene' is for example 'Bill Clinton, Eiffel Tower, Paris, Times Square, Central Park'. An 'Abstract object' or an 'Abstract scene' is for example "sadness, happiness, power, heaven, and paradise" (Jörgensen, Jaimes, Benitez and Chang, 2001: 5). 'Action' supplementary enriches the information about the action, if any. The 'Media' class defines the tools a graffiti art work was created with, as 'Spray paint', 'Stationary' and 'Paint'. There are two main categories of spray paint, 'Professional' and the common 'Hardware' spray paint. It is also of formal interest to state, under 'Caps used', if standard hardware caps were used or if professional graffiti art caps were used for the production of a graffiti art work. 'Stationary' tools are used generally for the production of sketches, as sketches represent also graffiti art only in another type of media. Nowadays, emulsion paint represents another medium used for the production of graffiti art. In the past emulsion paint was used only for backgrounds. Therefore, it is common to encounter graffiti art created in mixed media with a 'Brush' or 'Roller' as tools of production.

4.1 Conclusion

This methodological paper announced a possible classification system for information obtainment from and about single photographs representing graffiti art. This introduced framework is useful as a base for the establishment of a research archive containing a higher quantity of photographs. Such a database could even be further developed into a properly programed computer database and several institutions, centers – for example a visual art oriented university department – could internationally share accessible, systematically classified data. This would also help to establish a proper understanding of graffiti art works, as these are according to art historians under-researched for 40 years, even though graffiti art is a part of contemporary arts and urban life. Data inserted into this proposed database needs to be collected by researchers as soon as possible after a graffiti art work has been identified as worth being indexed in such a database.[11]

Table 3: Description (see Fig. 7)

Image elements					
	Letterforms:	Yes			
		Exact letterforms:	SIEK		
			Substitute for:	'I'	
		Style:	Wildstyle-3D[8]		
		Design elements:	Bits, extensions, cuts		
	Background:				
		Created/Not:	Partially		
			What:		Sky, water, color
	Character:	Yes			
Object/Scene content					
	Generic object:	Monkey head, hands, chain			
		Specific object:	Mojo Jojo (Powerpuff Girls) [9]		
			Abstract object:		Aggression
	Generic scene:	City, outdoor			
		Specific scene:	x		
			Abstract scene:		Destruction
	Action:	Water dam rapture[10]			
Media					
	Spray paint:	Yes			
		Professional:	Zenith Cans, 94, (+?)		
		Hardware:	Pylox, Anchor, (+?)		
		Caps used:	Professional graffiti art caps		
	Stationary:	x			
	Paint:	Yes			
		Brush:	x		
		Roller:	Yes		

Fig. 1: Graffiti art works: general street view
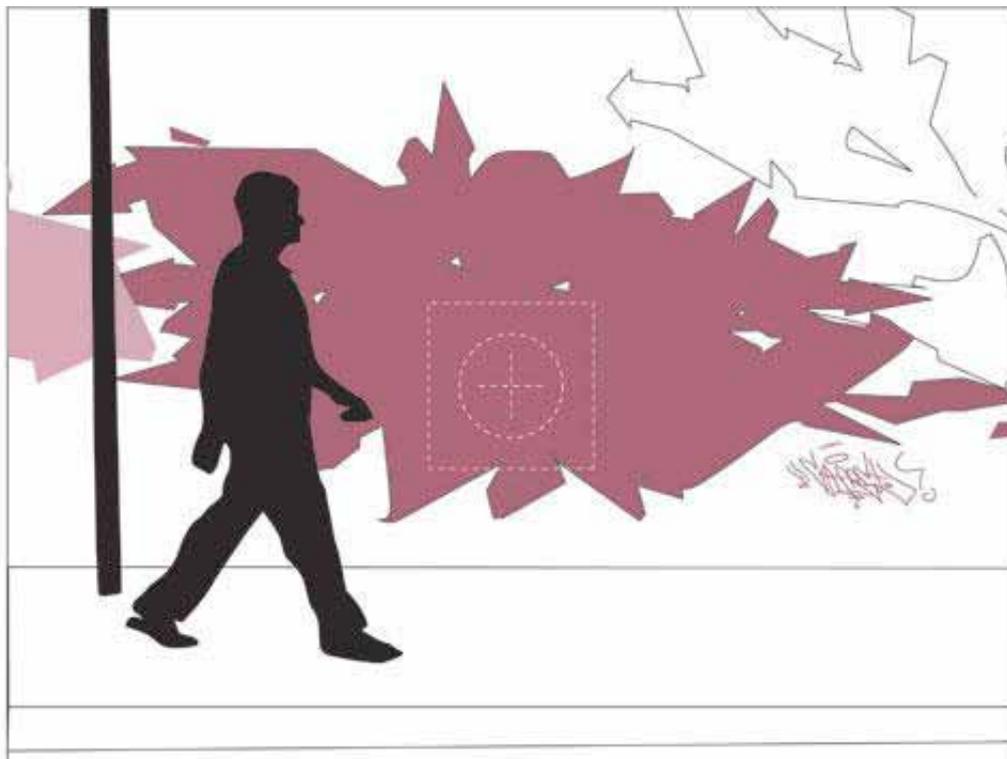
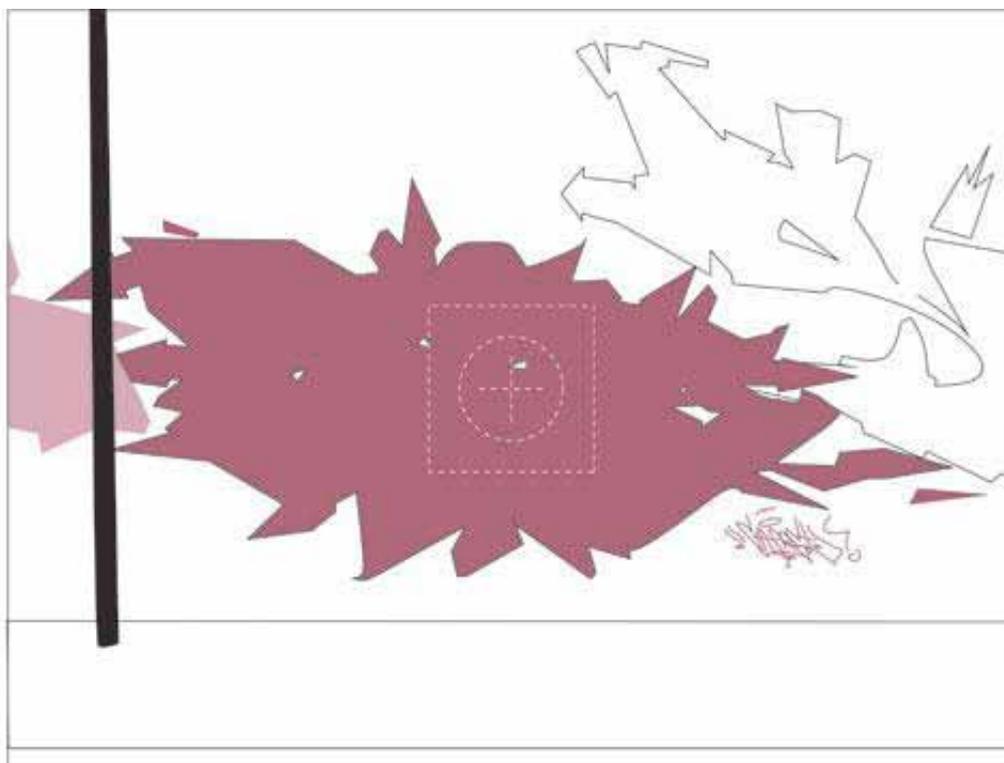Fig. 2: Graffiti art work: human scale in photograph

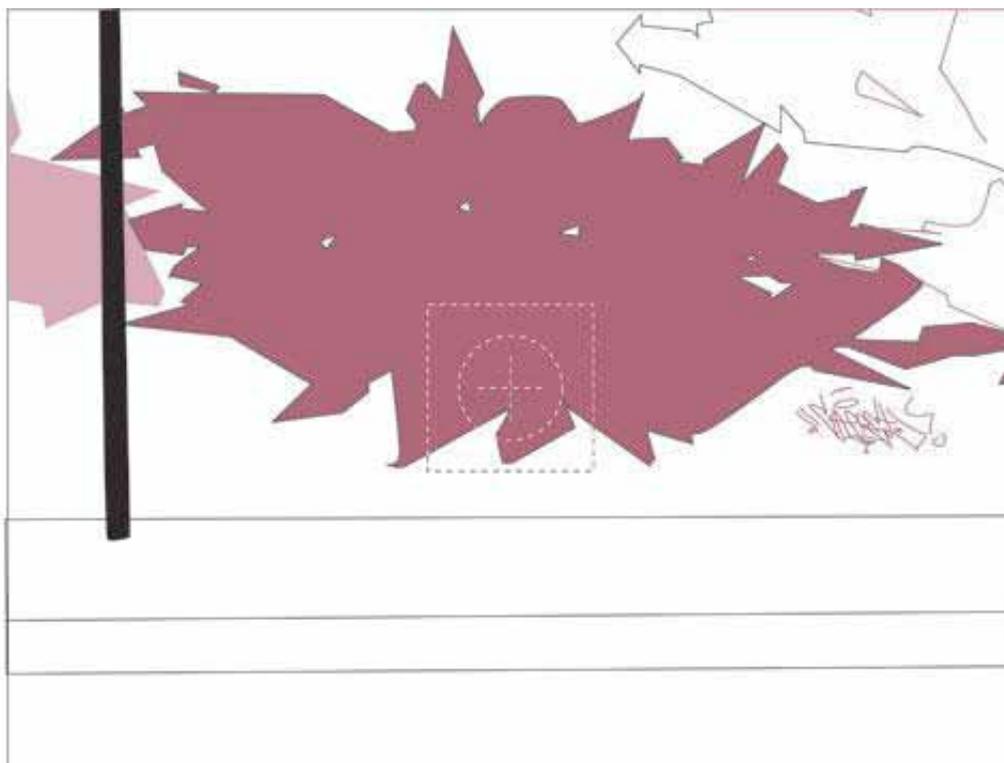Fig. 3: Graffiti art work: focused piece in center of photograph

Fig. 4: Graffiti art work: focused piece aligned along the top edge of the photograph
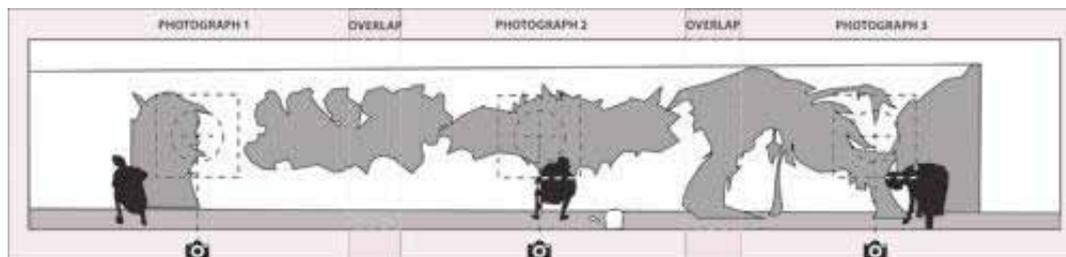
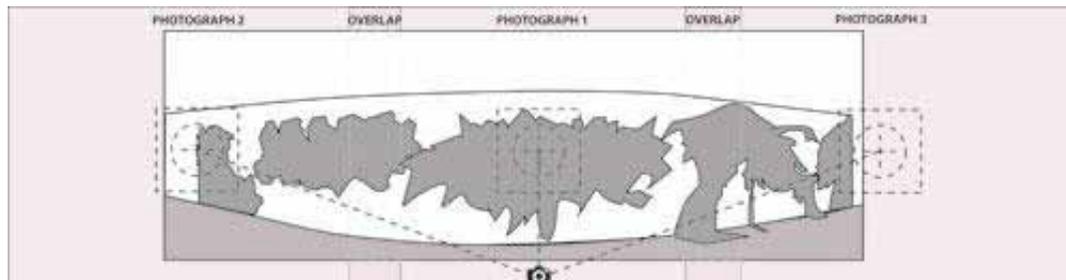Fig. 5: Graffiti art production: stitched photographs (parallel)

Fig. 6: Graffiti art production: stitched photograph with a fisheye effect

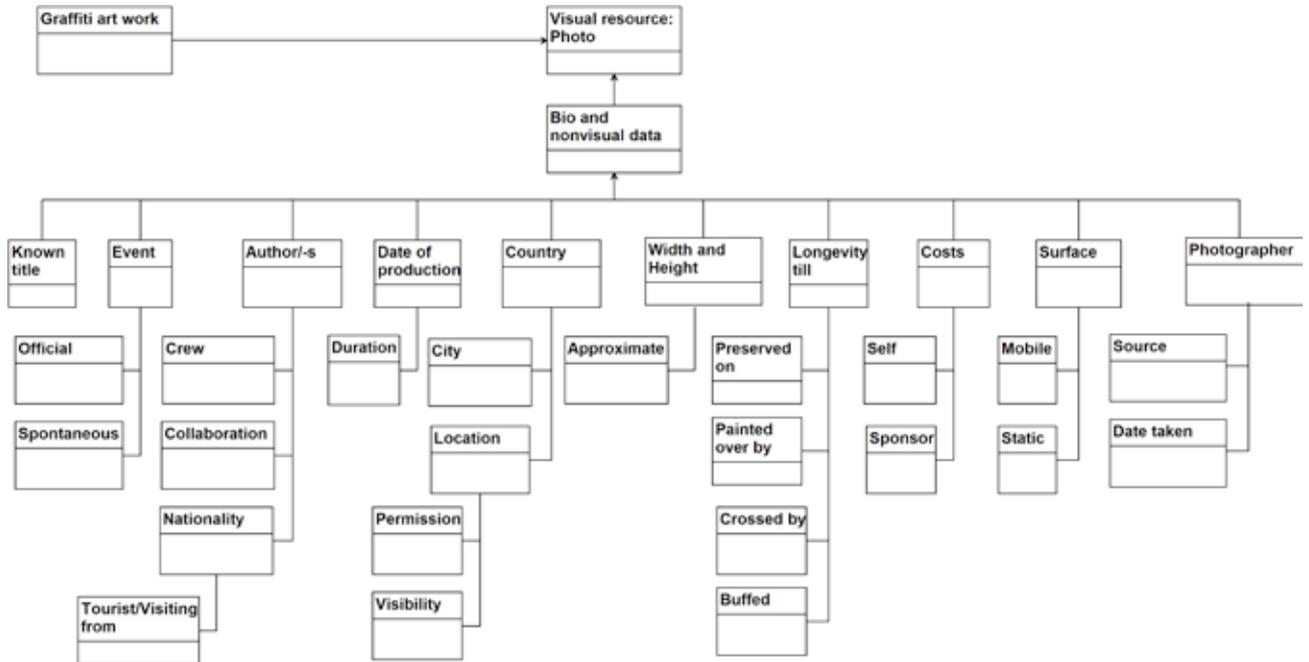Fig. 7: First prizewinning graffiti art work at *Kul Sign Festival 2012*

Fig. 8: Classification system of information: Bio and nonvisual data
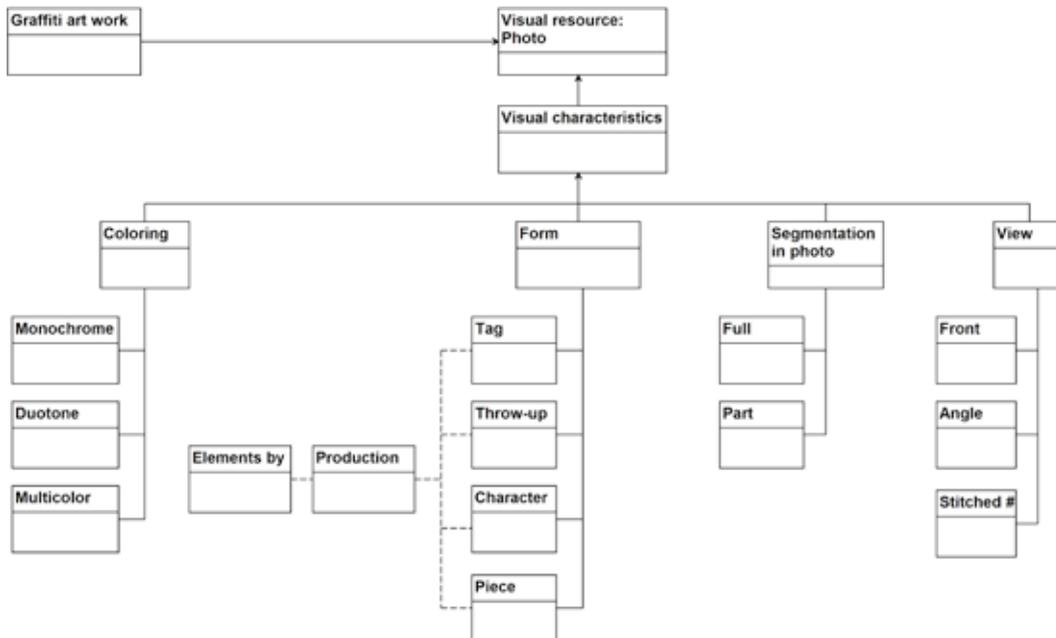

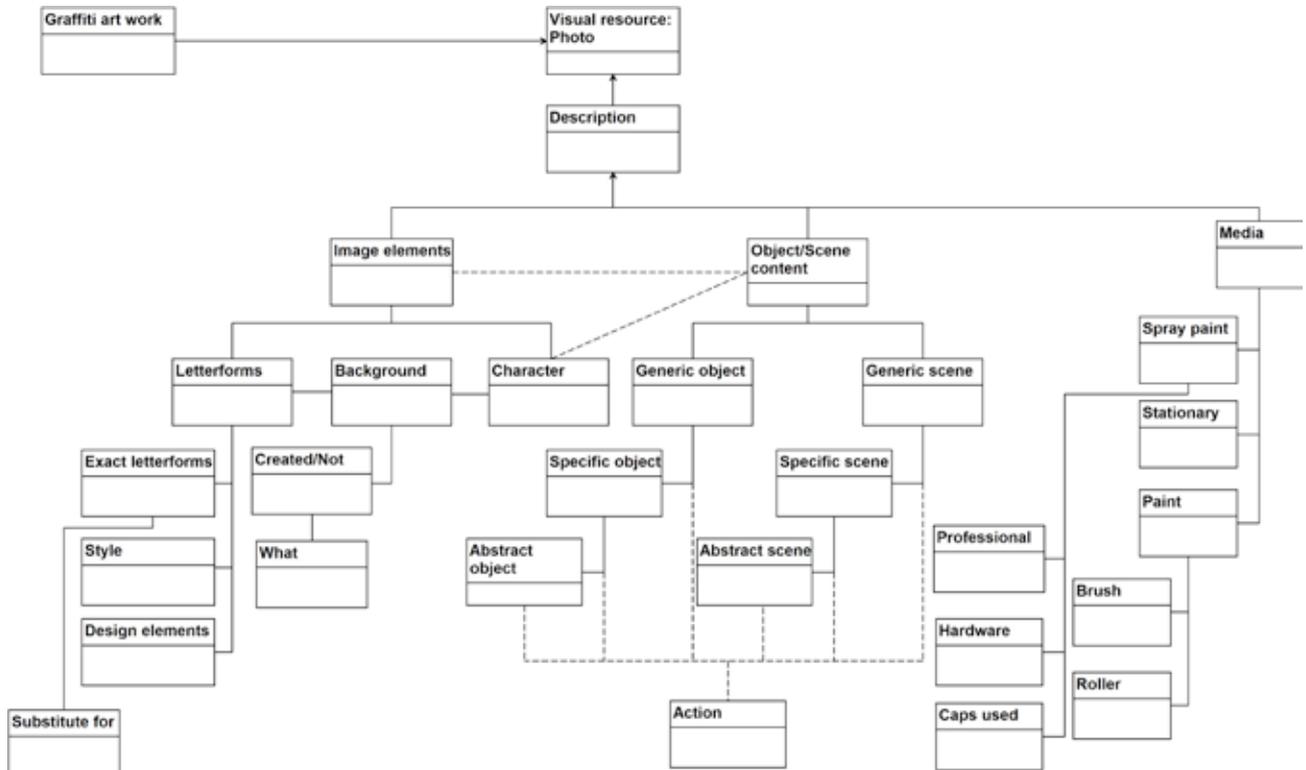Fig. 9: Classification system of information: Visual characteristics.

Fig. 9: Classification system of information: Visual characteristics

Acknowledgements

I would like to thank Kevin Thompson for proof reading the article.

Notes

1 - However, a graffiti art work – under certain circumstances – might survive years. It might be even preserved all together, but generally, the life span of such a work is rather short (several weeks). In the present article, a sketch on paper or a graffiti art work produced on canvas would be considered as a graffiti art work if such work was created in the 'graffiti art' genre by an graffiti artist.

2 - It seems that there are globally only a few graffiti research archives. One is in Germany, Das Berliner Graffiti-Archiv [The Berlin Graffiti-Archive] <http://www.graffitieuropa.org/berlin/mensahschramm1.htm>, and one in Austria, Wiener Graffiti- und Street-Art-Archiv [Graffiti- and Street-Art-Archive in Vienna] <http://www.graffitieuropa.org/archiv1.htm>.

3 - I realized only after collecting thousands of single photographs of graffiti art that there are certain more preferable ways to take such images.

4 - The conceptual framework could relatively be easily programed as an IT database application.

5 - The authors of this graffiti art work are also to be seen in the closing sequence of KUL SIGN FESTIVAL 2012 (Gecko Scope, 2012). For more info on the Kul Sign Festival see also Tam (2012).

6 - For excellent studies about graffiti art styles, in pieces, see Gottlieb (2006; 2008).

7 - See for example the case of a SIEK piece in Novak and Yousof (2014).

8 - SIEK, 2012. Pasar Seni, Kuala Lumpur.

9 - BONE, 2012. Kuala Lumpur.

10 - SIEK, 2012. Pasar Seni, Kuala Lumpur.

11 - Field research and conduct of personal interviews with graffiti art works' authors might be needed in order to obtain solid data.

References

Austin, J. (2001) *Taking The Train: How Graffiti Art Became an Urban Crisis in New York City*. New York: Columbia University Press.

Austin, J. (2010) More to see than a canvas in a white cube: For an art in the streets. *City: analysis of urban trends, cul-*

ture, theory, policy, action, 14, 33-47.

Berinstein, P. (1999) Do You See What I See? Image Indexing Principles for the Rest of Us. *Online 23,* 85-88.

BONE (2012) Kuala Lumpur.

Castleman, C. (1982) *Getting Up: Subway Graffiti in New York.* Cambridge, Mass.: The MIT Press.

Duncan, C. H. (2010) Graffiti's Vasari: Jack Stewart and Mass Transit Art. *Archives of American Art Journal* 49, 40-49.

Ganter, C. (2013) *Graffiti School: Student Guide.* London: Thames and Hudson.

Ganz, N. (2004) *Graffiti World: Street Art From Five Continents.* New York: Harry N. Abrams Inc.

Gottlieb, L. (2006) *Applying Panofsky's Theories of Iconographical Analysis to Graffiti Art: Implications for Access to Images of Non-Representational/Abstract Art*. Faculty of Information Studies, University of Toronto.

Gottlieb, L. (2008) *Graffiti Art Styles: A Classification System and Theoretical Analysis.* Jefferson: McFarland and Company.

Hixson, C. (2003) *Analysing the Subject of a Picture: Guidelines.* [Online] Available at: https://library.uoregon.edu/sites/default/files/data/diglib/meta/Image_Subj_Analysis.pdf [Accessed: 15/11/2015]

Hollink, L., A. T. Schreiber, B. J. Wielinga, and Worring, M. (2004) Classification of User Image Description. *International Journal of Human-Computer Studies* 61, 601-626.

Chalfant, H., and Prigoff, J. (1987) *Spraycan Art.* London: Thames and Hudson.

Jaimes, A., and Chang, S.-F.(2000) A conceptual framework for indexing visual information at multiple levels. *ISandT/SPIE Internet Imaging 3964.*

Jörgensen, C., Jaimes, A., Benitez, A. and Chang, S.-F. (2001) A Conceptual Framework and Empirical Research for Classifying Visual Descriptors. *Journal of the American Society for Information Science and Technology* 52, 938-947.

Kramer, R. (2009) *A Social History of Graffiti Writing in New York City, 1990-2005*. PhD Dissertation. New Haven: Yale University.

Layne, S. S. (1994) Some Issues in the Indexing of Images. Journal of the American Society for Information Science 45, 583-588.

Layne, S. S. (2002) Subject Access to Art Images. In M. Baca, Ed. *Introduction to Art Image Access: Issues, Tools, Standards, Strategies.* Getty Publications [Online] Available at: www.getty.edu/research/publications/electronic_publications/intro_aia/layne.html [Accessed: 15/11/2015]

Ley, D. and Cybriwsky, R. (1974) Urban Graffiti as Territorial Markers. *Annals of the Association of American Geographers* 64, 491-505.

Novak, D. (2014) Methodology for the Measurement of Graffiti Art Works: Focus on the Piece. *World Applied Sciences Journal* 32, 40-46.

Novak, D., and Yousof, G.-S. (2014) Comparison between Wayang Kulit Kelantan and Graffiti Art in Greater Kuala Lumpur: Similarities and Differences. *Annals of the Náprstek Museum* 35, 3-22.

Novak, D. (2015) Reflections of Islamic Culture in Malaysian Graffiti, in Tomáš Petrů, Ed. Graffiti, *Converts and Vigilantes: Islam Outside the Mainstream in Maritime Southeast Asia.* Vienna: Caesarpress.

Shatford, S. (1986) Analyzing the Subject of a Picture: A Theoretical Approach. *Cataloging and Classification Quarterly* 6, 39-62.

Schacter, R. (2013) *The World Atlas of Street Art and Graffiti.* Sydney: New South Publishing.

SIEK (2012) Pasar Seni, Kuala Lumpur.

Snyder, G. J. (2006) Graffiti media and the perpetuation of an illegal subculture, *Crime Media Culture* 2, 93-101.

Snyder, G. J. (2009) *Graffiti Lives: Beyond the Tag in New York's Urban Underground*. New York: New York University Press.

Stewart, J. (1989) *Subway graffiti: An aesthetic study of graffiti on the subway system of New York City, 1970-1978*. New York: New York University.

Stewart, J. (2009) *Graffiti Kings: New York City Mass Transit Art of the 1970s.* New York: Melcher Media,

Tam, S. (2012). Street Art and Graffiti Celebrated in Annual KUL SIGN FESTIVAL. The Star. (17 April, 2012) [Online] Available at: http://www.thestar.com.my/Travel/Malaysia/2012/04/17/Street-art-and-graffiti-celebrated-in-annual-KUL-Sign-Festival/ [Accessed: 15/11/2015

Thompson, M. (2009) *American Graffiti.* New York: Parkstone International.

Gecko Scope (2012) *KUL SIGN FESTIVAL 2012* [Online] Available at: , http://www.youtube.com/watch?v=IasQj4Kh6SEandfeature=related. [Accessed: 15/11/2015]