Presentation VAEDA 2009. Untutored Adolescents Understanding of Photography: Implications for the Visual Arts Classroom. Susanne Jones

Abstract: This study investigates young peoples transition from socially constrained image making to innovative photographic practice within the art education context. 117 students aged 10-17 from schools in NSW Australia, were asked to make photographs and interviewed for the study. They were on the whole found to have naïve theories of photography. The study identifies the constraints young peoples' vernacular theories about what makes a good photograph have on their own photographic image making.

The 717 photographic responses by the 10-17 year olds to the task 'make a photograph of your friend so when we look at the photograph they cant be recognised' were analysised to determine the impact naïve realist theories of photography might have on untutored adolescents' image making using a digital camera. The experimental series "photograph a friend" looked for evidence of spontaneous procedure change and experts judged the photographs for levels of innovation. There was a low level of innovation observed by the judges and on the whole the adolescents found the task challenging and manipulated the subject rather than the photograph covering the subjects head or reverting to long shots.

Causal reasoning in adolescent photographic origination.

This paper represents the findings from the first of a series of experimental investigations that attempt to identify the constraints on adolescent reasoning when using photography as a creative medium. It presupposes that the mental processes involved in using photography as a creative medium are cognitively challenging and rely on a complex interaction of physical procedure and mental reasoning which though seemingly transparent are in reality complex and not well understood.

As young people grow and mature they develop increasingly more complex theories of art and by implication photography (Freeman & Sanger, 1991, Jones, 1998). Early theories held by children are understood to be naïve and simplistic. During

adolescence the understanding of the world becomes more complex and profound as theories becomes more sophisticated and reflexive. We use our theory to make value judgements and develop understandings of not just photographs, but the photographed world. My study relies on the notion of conceptual understanding being progressive in response to both the internal and external environment.

Creativity involves, in part, the innovative manipulation of materials in order to communicate in visual form an idea, feeling or belief in such a way as the viewer realises meaning on an intellectual and/or emotional level. Whether it is paint, wood or marble the artist is required to work with the properties of the material to make it represent something else (whatever is being depicted). The problem with photography is that it already resembles something else nearly exactly. From the time of Fox Talbot's Pencil in Nature (1844/1996) it was argued that photography is an objective form of representation. As a consequence of this perception, photography has acquired among its many functions, the role of documenting the evidence of our histories by recording events, from the personal to the international. Yet it is the very verisimilar nature of photography for which it is much revered and for which it fulfils such an important function in our society that makes it a difficult medium for untutored adolescents to work with, with any artistic sensibility. This research claims that it takes a complex or reflexive theory of photography to do so. That anyone can take a decent photograph is a myth, and has more to do with successful advertising campaigns by Kodak and Sony than the reality of successful photographic image making.

Background

Bourdieu(1965) claims that when it comes to photography most adults have a naïve realist appreciation of the medium. He attributes this to the very real constraints the social functions of photography (portraiture, documentation, recording of history within the family and community, evidence in science and law) hinder innovation and the use of the photographic medium as an expressive art form. He asserts that the aesthetic qualities of photographs are constrained by the social function as popular culture (the snapshot) (Bourdieu, Boltanski, Castel, Chamboredon, & Schnapper, 1965).

When exploring photography in the art context an understanding of the photographic image as metaphor is necessary. A metaphoric photograph has an ability to

refer to something other than what it is, to extract itself from the personal subject-object relation of vernacular photography. Studies reported by (Beilin, 1999) show that children can decode the meaning in metaphoric photographs from the age of 8 year old .

Unlike children's drawing, there are only a handful of studies that investigate children's photography. References to the cognitive processes involved in making photography are scant. Most studies are concerned with analysing the content of the imagery. These studies extrapolate from the children's photography what children consider to be important in different settings and at different ages rather than investigating the thinking processes involved in making the photographs. A joint Birmingham University and Kodak study looks at the types of images children and teenagers make (Thomas, Davison, & Sharples, 2001), analysed the content of 180 children's photographs and found that children at different ages made photographs with different intentions and the content reflected their level of social development. Another study analysed what children 3-12 years old took photographs of on trips to the zoo (DeMarie, 2001). The younger children photographed each other, tables and the ground while the older children took photographs of the animals in cages having conceptualised "the zoo".

Studies of children's drawing provided the framework in the form of Berti and Freeman's (1997) studies of children's art. These studies show that children bring both internal and external resources, in the form of framework theories and cultural constraints when drawing.

In order to teach photography to adolescents in more demanding ways, in order to fully unlock the creative potential of the photographic medium it is necessary to articulate what resources untutored students, evidenced by their vernacular theories of photography, bring to the making of photographic images. How exactly is it that their framework theories constrain or enhance their practise? This paper addresses two experiments from a series of six which tested the overarching research hypothesis that:

> *Despite the seemingly simple mechanical nature of photographic production, the making of a photograph presents a mental challenge to adolescents' causal reasoning as they make judgements framed by their vernacular theories of photography.*

Sample

The data for this research was collected between late 2001 and the middle of 2003 in Sydney Australia. 117 students (72 girls, 45 boys), ages ranging from 10-17 were interviewed and asked to make photographs, all came from New South Wales Government primary and secondary schools, located in and around Sydney's eastern, western and south-western suburbs and ranged from the inner city to the semi-rural hinterland. The students represent a range of socio-economic and cultural backgrounds. In all, 3 primary schools and 6 secondary schools participated in the study.

In order to map any shift in representational development throughout adolescence the data were divided into three age groups. 10-13 year old , 14-16 year olds and 17 year olds. Nearly all participants claimed to be able to use a camera (table 1).

Study Design and Methodology

The study required participants to be interviewed, answer a written questionnaire and make a series of photographs. The photographs were analysed and judged by independent adult judges. This study used digital cameras in an effort to reduce the procedural knowledge required to make photographs.

Participants worked in pairs. Participant students needed a level of familiarity with each other in order to take photos and instruct each other to 'pose' for what they considered to be solutions to the photographic problems.

A Good Photograph.

Experiment one: Questionnaire sets out to map shifts in adolescent reasoning in their vernacular theories of photography. It tested the null hypothesis *that non-expert 14-16 year old adolescents students first encounter the making of photographs as naïve realists.*

A questionnaire was administered to each participant in the study. The questionnaire focused on what participants considered to be good or bad photographs and what 'things' might make a photograph bad or good. In my research I was not interested in what the respondents thought was good or bad, but rather how adolescents reasoned within their framework theories about what a good or bad photograph might be. It is understood that reflexive theories of photography include consideration of the audience within their framework theories (Blaxandall, 1986).

The participants' responses for each question were coded as to which agencies of a theory of photography, subject matter, technical features (such as lighting and composition), photographer, or audience, were seen to be responsible for making the image 'good' or 'bad'.

Results and discussion:

When describing a good photograph 76% of 10-13 year olds, 65% of 14-16 year olds and 30% 17 year olds attributed 'goodness' to the subject of a photograph. There was an increase in the response to the contribution of the audience in making an image good with age. Such that <5% of 10-13 year olds, 8.5% 14-16 year olds and 30% 17 year olds included reference to the audience in their description of a good photograph (figure 1). According to all groups the photographer had a small impact on making a photograph good or bad! These patterns were consistent across all questions that explored what makes a photograph good or bad. The smaller percentage of participants that included the audience in their reasoning about good and bad photographs in the younger age groups is taken as evidence that participants in the study had a naïve theory of photography. These results refute the null hypothesis and it can be claimed that untutored adolescents come to the classroom to study photography with a naïve realist understanding of photography.

Making photographs:

Experiment 2:

Having identified that adolescents up to the age of 15 and 16 held a naïve realist theory of photography the next step was to explore how their theory might impact when participants made photographic images. Participants were challenged to make a photograph of their friend so that the friend cant be recognised in the it. Photographing their friend in this manner is in direct contradiction to the types of photographs most adolescents like to make, that is photographs of their friends smiling (Thomas et al., 2001). With a reflexive theory of photography and sufficient procedural understanding this task is possible, however, without these two resources, the fallback position is social photography :portraits and family snaps. Innovation in the images was used as a measure of reflexivity and judged by expert adult judges. Analysis of the compositional elements format, shot description and subject matter mapped the shifts in the images. Photographs were compared using ANOVA, which tested significant variation between age groups in

terms of changes in composition , subject matter and shot description , subject gaze and pose.Experiment 2 tested the null hypothesis *that representational development, as evidenced by innovation in photography, is not constrained by adolescents' naïve realist theories of photography.*

Photograph 1: Photograph your friend. (Control)

Participants were first asked to make a photograph of their friend, this was treated as a control and tested participants' ability to use the camera. The control photograph was compared with subsequent photographs made in the research.

Summary of results of control photograph: Overall, the images made for Photograph one (control), by all groups were similar and referenced vernacular portrait images. Most photographs tended to be of landscape format with subject centrally positioned framed as head and shoulders, looking directly at the camera and smiling. There was little consideration for overall composition of the photograph, with very little attempt to consider the background objects in the composition of the image, although there was increasing evidence of this in the older groups. Whilst acknowledging that arrangement of background objects within the frame may be accidental within this research arrangement of background objects into the composition is seen as an indictaor of some understanding of photographic procedural knowledge.

Photograph 2: Photograph your friend so they can't be recognised

Results.

Photograph 2: 10-13 year olds Nearly half of the photographs made by 10-13 year olds were of landscape format, with the subject placed in the center of the frame, and background objects included without consideration for composition (45.8%), they included the body of the subject (37.4%), framed as long shots (41.1%). The subject either turned away from the camera (36.4% fig5.8) or covered their head (28%. fig 5.7). Mostly the subject seemed self conscious (43.9%) or held an obvious pose (32.7%).

Fig2,3 Table 2

Photograph 2: 14-16 year olds made images that were of landscape format , with the subject placed in the center of the frame, and background objects were included without consideration of composition (47.1%). They were of the head and shoulders of the subject (47.6%), framed at head and shoulder distance (51%), and 32.4% were either

turned away from the camera (fig 5.9) or 34.8% covered the head of the subject (fig 5.10). In most images (41%) the subject seemed self conscious .

Fig 4,5Table 3

Photograph 2 : 17 years old+ Like the other two groups the majority of images made by the expert group for Photograph two, were mostly of landscape format , with the subject placed in the center of the frame, and background objects included without consideration for composition (46.9%). The photographs were of a part of the subject's body (46.9%), framed as long shots (31.3%), turned away from the camera (40.6%) had no obvious pose (37.5%).

Fig6,7 Table 4

Between age group variation There was significant variation on the measure of subject matter between the 10-13 year olds (who photographed the whole body) and the 14-16 year olds who photographed head and shoulders with the 17 year olds who photographed mainly parts of the body; the ANOVA was $F(2, 342)=14.8$, $p<.01$).There was also significant variation between 10-13 year olds (long shots) and 14-16 year olds (head and shoulders) on measures of shot description for photograph two, the ANOVA was $F(2, 346)=14.8$, $p<.01$).

Discussion

The results suggest that the images produced by the younger groups are constrained by their naïve theories of photography, as evidenced by high percentage of photographs that had limited innovation. Although the level of innovation in photographs overall made for Photograph Two is not high, there is an increase in the percentage of images judged as having some level of innovation from the younger to the older age groups. The 14-16 year olds produced proportionally more innovative images than the 10-13 year olds, and as might be expected both were proportionally less than the 17 + year old group.

The 10-13 year olds made both their photographs at a distance from the subject. The 14-16 year olds increased the percentage of medium shots when faced with this task. Significantly all age groups changed their subject matter for photograph two. On the surface this could be considered innovative procedure change however, although the 10-13 year olds' increased the proportion of part of body shots these were made at some distance, so cropped images often just had the head cut off by the frame with the rest of

the body in the photograph. Change in subject matter by 14-16 year olds increased the number of part of body and whole body photographs but many of the images were made by just turning the subject around and photographing the back of the head.

What the 10-13 year olds and the 14-16 year old did was to manipulate the subject of the photograph rather than employ photographic devices. In most cases they did this by having the subject turned away from the camera or by covering the head (or face) of the subject (fig2-5). They covered the face by using objects found in the room or props supplied by researcher. There seems to be no difference in the types of photographs made when props were available or not, nor whether they were supplied or found in the room[1].

The 17+ year old group had a high number of photographs with subject turned away but like the higher incidence of long shots, in this group they seemed to be important compositional considerations (fig 6) rather than just making a photograph of the back of someone's head. The 17+ year old group had significantly more 'part of body shots' than other groups and consequently more combined extreme, big and close-up shots. These results are consistent with a higher percentage of innovative images that were recorded for the expert group.

The subject's pose and the way they interact with the camera (subjects ' gaze) are fascinating observations and really require a study of their own. By recording the pose we are able to some extent gauge the interaction between subject and photographer. In Photograph one the subjects pose is playful and interactive with the camera, for Photograph two participants struck "character poses" one 11 year old dressing up as a Viking, a girl posing as "Charlies Angel", 14-16 year olds dressed the subject as witches or cool dudes. Others dressed up the subject coving faces with wigs, cloth, books, bags and furniture without any particular theme. Participants swapped hats, shoes and even school bags. It would seem that for 10-13 year olds and indeed the 14-16 year olds recognisability was closely tired to identity and identity was invested in the objects of apparel that the participants chose to wear.

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[1] Use of props: props as in hats , pieces of cloth were brought into the experimental session to half the schools. Participants could choose to use them or not.

The significant variation between Photograph One (control) and Photograph Two for both 10-13 year olds and 14-16 year olds on the measures of subject matter, subjects gaze and pose together with the variation between these two groups and the 17+year old, suggests there is difference between the younger and older groups.

There was evidence of significant procedural rigidity in the level of manipulation of the subject matter such as photographing the back of the head and covering their face or head. This indicated a lack of knowledge of photographic practise and a very basic and naïve understanding of the making of images using a camera even when the seemingly simple digital camera was used. It could be said that the constraints of their vernacular theories of photography had a significant impact on the types of images participants made that the null hypothesis is refuted.

Conclusion

When untutored 12-16 year old students come to the visual arts classroom they come with a naïve theory of photography. This impacts on how they perceive photography and how they might make photographic images. Using photography as an expressive (rather than recording) medium requires young people to be able to allow the photograph to speak without textual or verbal interpretation. This requires the photograph to be understood in a metaphorical manner so that what is observed and incorporated by selection, into the reinterpreted and framed scene , draws the viewer's mind to points of reference as it were, beyond the frame. Likewise the arrangement of the elements of the photograph must draw attention to the subject in an interesting way. The Naïve realist viewer sees only the subject of the photograph and not the image as a whole.

The adolescents' framework theory of photography may or may not change and become reflexive over time. In the meantime teachers need to provide a rich source of external models for adolescents as they grapple with this seemingly simple medium.

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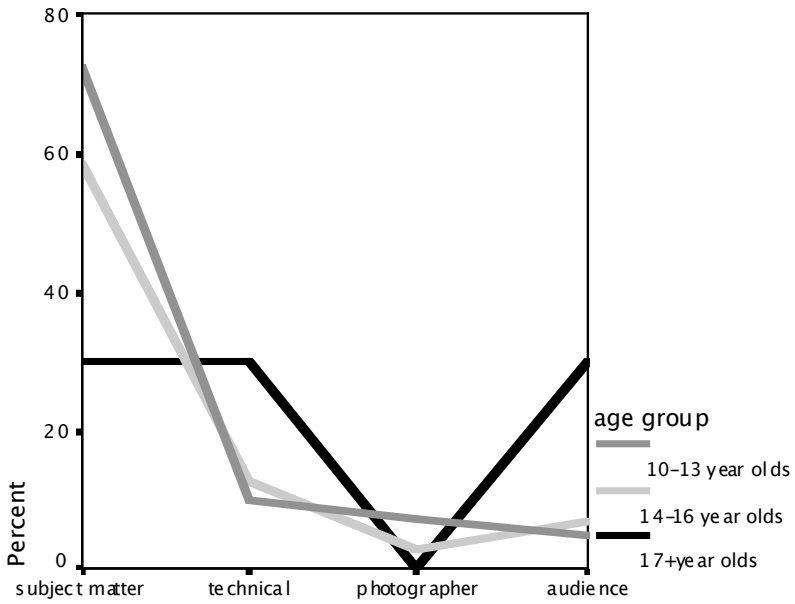

Figure 1: What make a good photograph

Fig2 Photograph 2: 10-13 year olds

Fig3 Photograph 2: 10-13 year olds

Fig4 Photograph 2: 14-16 year olds turn

Fig 5 Photograph 2: 14-16 year olds cover

Fig 6 Photograph 2: 17 year olds+

Fig 7 Photograph 2: 17 year olds +

Table 1. Can You Use a Camera?

Can you use a camera?	10-13 year olds (n=37)	14-16 year olds (n=63)	17 year olds (n=11)
yes	92.5%	91.3%	100%
no	7.5%	4.3%	
Don't know		4.3%	

Table 2 : Significant variation between Photographs one and two

10-13 year olds	Photograph 1	Photograph 2	ANOVA
Subject matter:	head and shoulders	body	F(4, 404)=45.2,p<.01
Subjects gaze:	faced camera	turned away	F(4, 404)=84.6, p<.01
Pose:	smile	self conscious	F(4, 403)=16.6, p<.01

Table 3 : Significant variation between Photograph one and two

14-16 year olds	Photograph 1	Photograph 2	ANOVA
Subject matter:	head and shoulders	increased part and body	F=(4, 815)=54.6,p<.01)
Shot description:	head and shoulders	head and shoulders and medium shots	F(4, 815)=37.4, p<.01
Subjects gaze:	faced camera	covered heads	F(4, 815)=173.8, p<.01
Pose:	Smile(33.8%)	Smile (6.2%)	F(4, 814)=45.2, p<.01

Table 4 : Significant variation between Photographs one and two

14-16 year olds	Photograph 1	Photograh 2	ANOVA
Subject matter:	head and shoulders	part of body	F=(4,114)=14.3,p<.01
Shot description:	head and shoulders	head and shoulders and medium shots	F(4, 815)=37.4, p<.01
Subjects gaze:	faced camera	turned away	F(4, 815)=173.8,p<.01
Pose:	Smile (33.8%)	Smile(6.2%)	F(4,114)=23.7,p<.01

Table 5: Percentage Innovation Scores for Photograph 2

Photograph 2 Judges score	10-13 year olds	14-16 year olds	17 year old+
failure	7.5	7.6	6.3
limited innovation	75.7	71	56.3
moderate innovation	9.3	14.3	31.3
successful innovation	0.9	6.2	6.3
excellent innovation	6.5	1	0