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Too Cool at School – Understanding Cool Teenagers

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ABSTRACT

Cool can be thought about on three levels; the having of cool things, the doing of cool stuff and the being of cool. Whilst there is some understanding of cool products, the concept, of being cool is much more elusive to designers and developers of systems. This study examines this space by using a set of pre-prepared teenage personas as probes with a set of teenagers with the aim of better understanding what is, and isn't cool about teenage behaviours. The study confirmed that teenagers are able to rank personas in order of cool and that the process of using personas can provide valuable insights around the phenomenon of cool. The findings confirm that cool is indeed about having cool things but in terms of behaviours cool can be a little bit, but not too, naughty.

Keywords: *Design, Cool, Personas, Teenagers.*

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1. Introduction

Designing interactive products requires an understanding of the potential users as well as an appreciation of the context of potential use. User centred design methods stress that it is important to invest time and energy in ensuring that these aspects, especially understanding the needs of users, are well understood (Gould and Lewis, 1985). Methods employed to realise this include the use of ethnographic study, the adoption of participatory approaches and the use of contextual enquiry. Participatory methods span the activities of engaging with potential users in the establishing of requirements (Beyer and Holtzblatt, 1998), working with users in the specific co-design of aspects of the interactive system (Blomberg and Henderson, 1990) and the inclusion of users in evaluation studies both during, and at the end of, the development lifecycle (Dumas and Redish, 1993).

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Within user centred design, whilst participatory methods tend to be favoured, several user centred, but not user participatory, methods have been developed that allow designers to study and model a population and to then design for that population without there being a need to directly engage with the intended users – this approach, of applying knowledge about a user group, is especially valuable where access to the intended user group is limited. One method that is widely used in this space is the use of personas (Cooper and Reiman, 2003; Grudin and Pruitt, 2002). Personas are attractive to designers as they do not require the design team to 'hang out' with the intended population but do provide pseudo real users with which to evaluate products and ideas. The use of personas in the design lifecycle has traditionally been static. Personas are developed by the research / design team and then used to inform decisions about the design – questions like 'would Craig use this?' and 'how would Mairie do that?' are used to help the developers and designers focus on the target group.

In our work we are designing interactive technologies for teenagers. Access to this user group is limited and whilst not being a problem for the research team, the developers and designers in this work were less able to meet teenage users and so the work aims to derive some knowledge about the teenage design space that can be formalised for use by these groups. The present study aimed to therefore establish a method to engage with teenagers in order to better understand their world - specifically, in this instance, we aimed to examine how personas could be used in a participatory activity to discover more about cool.

The remainder of this paper is structured as follows: the first section reviews the literature on the use of personas in design, on the study of designing technology for and with teenagers, and then leads into the literature around understanding cool as it applies to design contexts. A participatory study is then described that had teenagers evaluate a set of teenage personas for their 'coolness'. Findings from this work are discussed and interpreted and the paper closes with discussion as to both the method and the results in terms of using personas in this way but also in terms of learning about cool in the context of teenage design.

2. Background Literature

Whilst previously used in marketing contexts, personas began to gain favour in design with the work by (Grudin and Pruitt, 2002) and (Cooper and Reimann, 2003). A persona is described as being a realistic representation or a stereotype and is

introduced to help the design team focus on these pseudo-users. Personas of children and teenagers have been used in child design by (Antle, 2006) in the design of a mentoring application, and in e-health design with (Bredies, 2009); several authors have studied the efficacy of the use of personas including (Grudin and Pruitt, 2002), and (Ronkko, 2005) who claimed limitations as to their use in standard design and development activities. One of the problems in the use of personas for design is in ascertaining that the persona set is representative – i.e. that it adequately models the target population; this is discussed in some length in (Ronkko, 2005). Personas have occasionally been used in other ways – an example that is close to our own work is the work by (Meissner and Blake, 2011) who use personas as prompts and probes in order to better understand an alien culture.

In terms of the general area of designing for and with teenagers, there is a relative shortage of published work. In terms of engaging teenagers in design studies, most of the work has teenagers as design informants or as designers of specifics as found in the literature on co-operative and participatory design. As examples, (Danielsson and Wiberg, 2008) used participatory approaches with teenagers to design computer games, (Buechley, Eisenberg, Catchen and Crockett, 2008) engaged with teenagers in the design of craft technologies using Arduino technology, (Mazzone, Read and Beale, 2008) carried out design prototyping with teenagers in the UK in a short stay school using plasticine and biscuit making to explore the design space of dialogue and visualization. Sewing kits and other prototyping products were used with teenagers to participate in the design of Telebeads (Labrune and Mackay, 2006) where the focus was on the physical and functional aspects of the design and teenagers were employed as testers of technologies in (Read, 2005).

For individuals wishing to design for, as opposed to design with, teenagers, there is a need to understand them and their worlds. Heuristic sets for design for this group do not exist but the design of ethereal aspects, fun, privacy and confidence (as examples), as highlighted by (Wixon, 2011), point to a need to understand design in the space around the functional, and in the particular case of teenagers potentially to design for cool which has been identified as a teen ideal. It is the case that things that teenagers use are often referred to in terms of their coolness (Rudolph, Abaled, Flynn, Sugimura and Agoston, 2011).

In the literature, Cool is variously described in terms of things, behaviours and people. As an example, (Poynor, 2000) refers to cool in terms of objects by suggesting that cool stuff is “great stuff to own”, but other literature couples cool objects with the

coolness of the person using them, thus moving the emphasis away from the artefact to the person (Southgate, 2003). Belk (2006) referred to cool in terms of it being a performance that needs to be validated by an audience; writing that cool "refers to a person who is admired because she, or more often he, exhibits a nonchalant control of emotions, a rebellious trickster demeanour, an ironic detachment from the regard of others, and a "cool" style of talking, walking, gesturing, and grooming". This definition lines up well with what many consider to be the origin of contemporary cool as being an attitude adopted by African Americans as a defence mechanism against prejudice (Belk, 2006; Moore, 2004; Nancarrow, Nancarrow and Page, 2002) but also aligns with what (Thompson, 1983) claimed when he wrote that the origin of cool was with the Ibo and Yoruba people of Nigeria in the 1400s where cool was defined as "grace under pressure".

In terms of teenagers and cool, cool has been associated with behaviours around authenticity and laid backed-ness and is rooted in an urge to challenge convention (Frank, 1997; Moore, 2004). It has been, since the 1960s, detached from adult culture and has become associated with an "I want that!" attitude (Neumeister, 2006). According to Southgate (2003) "the cool" are always looking to be different so that they can express themselves in an authentic manner.

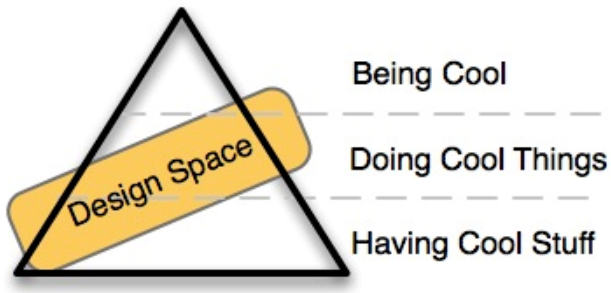

Figure 1. The Hierarchy of Cool (Read et al, 2011)

Designing for cool, and specifically within the context of teenagers demands attention to all aspects of cool – the having of cool things, the doing of cool stuff and the being cool. These aspects are clearly related but the relationships between them are not all that well understood in the context of design. In an attempt to better identify where interaction design might be able to associate with cool, Read et al. (2011) described a hierarchy of cool (shown in Figure 1), which tentatively identifies the space for design as being primarily about understanding what is 'cool to do'; this approach has some synergies with the early work by (Shneiderman, 2004) where he investigated the potential to design for fun by considering 'fun in doing' and also to the work by

(Holtzblatt, Rondeau and Holtzblatt, 2010) where cool is considered within the context of product design and interactive technologies.

3. Study

The aim of this study was therefore to investigate cool with teenagers in order to better understand our own design space. The decision was made to do this work by having teenagers evaluate a set of teenage personas in order to look holistically at how teenagers themselves might judge another teenager, having knowledge of what the teenager looked like, his or her demographic information, social background, likes and dislikes and the technologies owned by, or accessed by, in terms of coolness. The method took some, but only little, direction from the work by (Meissner and Blake, 2011) who used the creation of personas as a data gathering exercise. Our work differs slightly in that it uses personas in order to better understand a user population. The intention was not to then deliver new personas (as is indicated in the work on provisional personas by (Goodwin, 2009)) although it is acknowledged that that could be one outcome from the conversations that took place around the existing persona set.

For our study, the main research question was:

- Can researchers discover cool traits with regards to ‘having cool’ and ‘doing cool’ by evaluating personas with teenagers?

and an associated question, which would be answered in the work was;

- Does the original persona set provide a diverse range of teenagers on the cool to uncool spectrum that can be used by researchers in designing and evaluating cool?

3.1 Method

In order to determine what cool was, the research team could have considered asking teenagers to isolate and identify ‘cool’ and ‘uncool’ individuals and then inform the research team as to what it was about these individuals that made them cool or not. This approach was rejected as a method on several counts. Firstly, there was an assumption that this kind of study, in a classroom, would be laden with histories and prejudices and could be damaging to the participating pupils. Secondly, in a classroom, individuals might not have with them their cool items, and thus only

behaviours would be captured. Thirdly, there would be no way of replicating the study, nor of generalizing the findings from the classroom.

The use of personas as proxy humans is well documented in design studies. Persona sets are traditionally brought in to remind designers about the real users of a system, to prompt discussion about design choices and to ground designs in a user group. Proponents of personas also claim that their use makes the design process more personal and many talk of their personas as if they are real participants in design activities.

The original teenage persona set used in this study had originally been created for a workshop for use by adult researchers focussing on the content creation and publication of digital media using the personas to drive their ideas. The set had been designed to cover all year groups in the UK high school system and to be gender balanced. Given that this persona set was a 'ready made' set of teenagers that had not originally been designed to be cool or uncool the research team deduced that this group would be an ideal set to answer the first (main) research question and in doing so would also help to answer the second research question. The study was therefore designed to allow a ranking of the personas in order of 'coolness' but also collect rich data to see whether the personas were in fact cool or not cool and what the reasons were for the decisions made by the teenagers.

3.2 The Persona Set

As previously stated the persona set was not originally created with cool in mind and was not part of the research groups prior work on cool and had not originally intended to be used in this area. In developing the persona set, the aim was to create a boy and girl from each year group of the UK high school system (aged 11 to 16). Given the ten persona limit imposed on the research team the aim was still to create a diverse set of individuals. Ideally the data for the personas should come from user studies, demographic information and field research but as with the majority of persona sets created the designers assumptions and experiences will have had an effect on the final persona set (Chang et al, 2008). The selection of the images also influenced some of the characteristics given to certain personas in an attempt to make the personas seem more authentic. UK demographic and ethnographic information was used where possible to ensure the cultural and ethnic mix of the population was realistic. As with Cooper's view on personas the research team decided that the use of stereotypes was acceptable in this situation as political correctness was not a goal in

the creation of this persona set, the goal was to create a credible persona set (Cooper, 1999).

To this end the persona set included teenagers from different countries, ethnic backgrounds and social backgrounds with single and separated families, different family income levels, different hobbies and interests to name but a few. The full persona set can be accessed at http://www.chici.org. Unlike the majority of persona sets created these personas were not given any specific goals or tasks related to the design of a product as this was not their intended purpose. They did include some of their hopes and aims in life which in evaluating their cool attributes is much more useful.

Each persona sheet consisted of five sections. Each persona was given a name, a photograph of what they looked like, a section on their demographics, their background (mainly focused on their lives, family and interests), and a section of their technology usage (what they have and how they use it) – see figure 1.

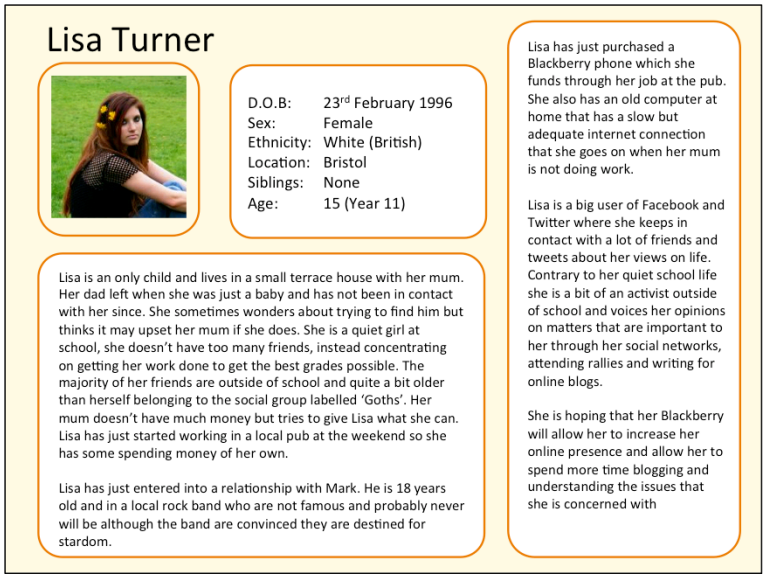

Figure 2. An example persona

3.3 Procedure

Sixty-three teenagers aged 16 and 17 participated in the study. The study took place at a research event held at a UK state funded high school. Ethical clearance was granted for all studies at the event and permission to participate was granted by the school. The teenagers were additionally given information about the study at the start and given the option to participate or not. They were also informed they could opt out of the study at any point. Each teenager was put into a group of two or three resulting in there being twenty-seven different groups. The groups were not required to be

single gender with nine of the 27 being mixed boys and girls, three being all boys and fifteen being all girl groups. Overall, across the study, there were 47 girls and 16 boys - the impact of this is discussed later in the paper but cross group differences are not explored as there are not enough groups to determine any differences in the gender make up of individual groups.

Figure 3. An example persona sheet

Each group was given a set of ten A4 pages with each page containing a persona (printed in the top half) and a table (in the bottom half) (see figure 3) for the group to record what element each persona;

- had that was cool,
- did that was cool,
- had that was uncool
- did that was uncool

Each group was also given a front sheet that contained a blank persona and they were asked to comment, on this sheet, as to how they used each of the five sections (see

explanation in the preceding paragraph) that made up a persona - this information is used during the discussion. As outlined above, each set comprised 10 personas and these were presented in a plastic wallet, with each subsequent wallet starting with a different persona in order to reduce order effects (thus wallets 1 – 10 each started with a different persona and then wallet 11 was the same as wallet 1). On the day, the pupils were asked to take out their personas, look over them and fill in the table below each persona before ranking the complete set in order of coolness. Having ranked the personas, the persona sets were collected in and the personas were coded within each wallet with 10 being awarded to the 'most cool' and 1 to the 'least cool'.

4. Results

The summarized results, with a tally of the frequency of each ranking for each persona can be seen in table 1. This shows that the persona Gary was ranked 10 – 'most cool' by 13 of the 27 groups. By adding up Gary's combined scores we can see that Gary was ranked as the coolest persona with a total score of 233. At the other end Wayne was ranked 1 – 'least cool' by 17 of the 27 groups and by adding up his scores we can see that he was considered to be the least cool of all the personas with a total score of just 53.

	Ranking (10 to 1)												
	10	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**Total**	**Mean**	**SD**
Gary	13	2	7	1	2	2					233	8.63	1.64
Wayne			1		1	1	1	1	5	17	53	1.96	1.79
Natacha		1	1	1	3	7	2	7	3	2	114	4.22	2.01
Deepak	3	4	2	6	4	4	2	2			182	6.74	2.09
Amanda		2	1	3	1	3	5	8	4		120	4.44	2.14
Lisa		1	6	4	4	1	3	4	4		146	5.41	2.32
Sophie	3	5	3	5	5	1	2	1	2		184	6.81	2.34
Ian	3	7	1	4	2	4	3		2	1	178	6.59	2.65
Kwok	3	2	4	1	2	3	5	1	4	2	147	5.44	2.91
Kelly	2	3	1	2	3	1	4	3	3	5	128	4.74	3.03

Table 1. Results reported for ranking of personas

This table clearly demonstrates that some personas were more 'cool' than others. The total tally on the right hand side shows that Gary was much cooler than Wayne but also that Natacha and Amanda, for instance, were pretty uncool compared with the other personas. It is interesting to note that the most cool and least cool in the list, Gary and Wayne had pretty skewed ratings demonstrating that these were generally

well accepted judgments that were made by most of the evaluating teenagers. Sophie was skewed towards the cooler end, as was Deepak; Kwok and Kelly both drew varied results suggesting that to some teens they were pretty cool but to others they were pretty uncool when compared with the other personas.

Given that the numbers only represent rankings as opposed to them being interval data, it is perhaps a little misleading to calculate averages but the averages and deviations are included in the table, not in order to make comparisons across the set of personas but rather to illustrate the findings. Gary and Wayne, with extreme averages and small SDs. were generally well understood to be cool and uncool and, with a high SD and medium average, Kwok and Kelly were much less obviously one type or another.

What the results of table 1 do not provide us with is any evidence of whether any of the personas are actually cool or uncool. We can see that Gary comes out as the coolest persona but we do not actually know if he is cool. He could quite plausibly still be uncool. He may just be the coolest of an uncool group. Likewise it could be the reverse in that they are all actually cool but Wayne is the least cool of the group.

To try and address this, the researchers used the written data collected about each persona. The rich data collected here will be used within the discussion section however the number of cool and uncool opinions generated for each persona is useful to highlight whether or not a persona was actually considered to be cool or uncool.

Due to the volume of data collected a systematic sample (every fifth data set from a random start data) of rich data from five of the groups was analysed and the results can been seen in table 2. These results show how many cool and uncool characteristics were recorded for each persona split by having cool/uncool and doing cool/uncool. An overall cool score has been calculated for each persona by attributing a score of 1 for each positive cool characteristic and a score of -1 for each negative uncool characteristic. These two scores were then added together to give the overall cool score for each persona. In calculating this cool score it has to be acknowledged that there could be some skew towards one or more persona on account of variation in the number of characteristics typically highlighted by individual evaluators. This, however, is compensated for in so much that each persona was ranked by each group and thus a verbose ranker would typically be verbose for both cool and uncool characteristics and would be applied across each persona in equal measure.

	Have Cool	Do Cool	Have Uncool	Do Uncool	Cool Score
Gary	16	14	4	6	20
Sophie	10	9	4	6	9
Deepak	12	10	6	9	7
Ian	7	12	8	5	6
Kwok	5	6	3	9	-1
Lisa	8	7	5	12	-2
Kelly	12	6	8	8	2
Amanda	7	14	8	12	1
Natacha	5	7	7	11	-6
Wayne	5	0	10	15	-20

Table 2. Results reported for ranking of personas

Table 2 confirms that Gary was in fact considered to be cool as his cool score was positive (20) and that Wayne was considered to be uncool with a negative score of -20. The table shows that Gary, Sophie, Deepak and Ian were considered to be overall cool, Kwok, Lisa, Kelly and Amanda were fairly neutral with all of them being slightly cool or uncool and Natacha and Wayne were considered uncool. Figure 4 highlights graphically the cool range of the personas from the coolest to the least cool. Given that this persona set was not designed with cool in mind, it does appear that the individuals in it cover, quite nicely, the span of cool.

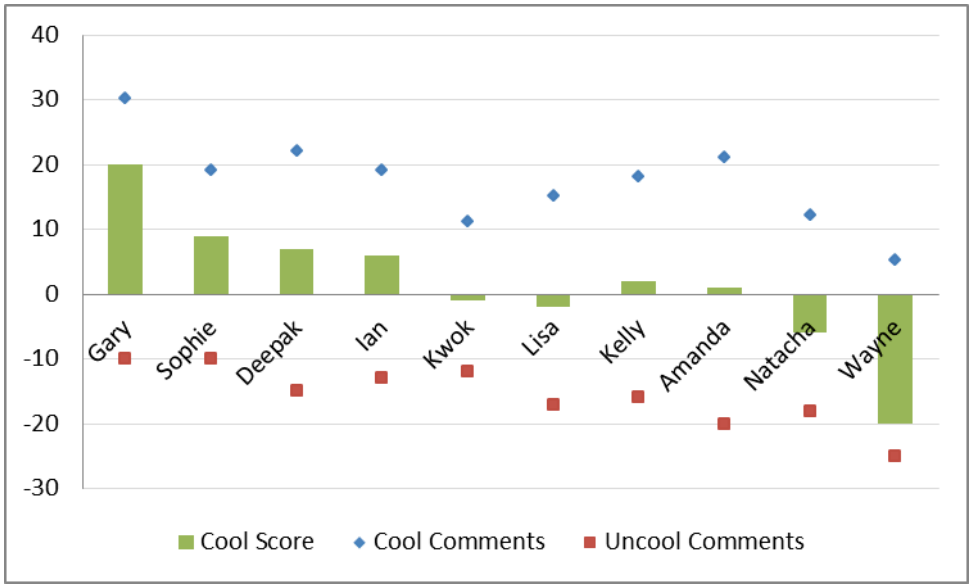

Figure 4. Cool score given to each persona with the number of cool and uncool comments plotted to highlight neutrality differences

5. Discussion

The results in section 3 show a positive outcome to the second research question we were aiming to answer which was to determine whether our persona set provided a

diverse set of personas along the cool spectrum. The graph in figure 4 shows a nice range of cool scores highlighting that we have personas that are cool, and uncool. There are also 4 personas that have almost neutral cool ratings. By looking at the cool and uncool rankings in table 2 this can be attributed to two different scenarios. Firstly that some of the personas have fairly even cool and uncool scores leading to this neutrality, secondly where others have some very high cool scores and some very low cool scores highlighting a split in opinions between the participants. This is evidenced by the plot of cool and uncool comments in Figure 4. Kwok has a lot less cool and uncool comments when compared with Amanda showing more neutrality toward Kwok and a split in opinions towards Amanda.

The results from the ranking exercise when compared with the rich data from the associated table therefore does support the assumption that teenagers are capable of ranking personas using their own personal view of cool as the measure.

The rich data received provided the research team with an abundance of information as to why certain personas were considered to be cool or not showing that personas can be used as a successful method for identifying cool and uncool traits of teenagers. To help illustrate this, the following section of the discussion will look at the rich data provided for the two coolest (Gary and Sophie) and two un-coolest (Wayne and Natacha) personas.

Gary received 120 cool comments, and 41 uncool comments, from the data provided by the evaluating groups. Gary was considered to be cool mainly because he was good at sport, he tried hard at school, had a very supportive family who he spent a lot of time with, his family are financially stable and he has the full Sky Sports (this is a costly subscription digital TV service in the UK) package with Sky Multi-room. The majority of uncool comments centred around the fact he had an old Pay As You Go mobile phone, he was too obsessed with sport and he had a limited social life, again due to the fact it revolved completely around his sporting pursuits. It is interesting to note with Gary that the majority of his cool comment came from him being good at sports and captain of the school football team while also receiving negative comments due to him being too obsessed with sport highlighting that there is a point in which his love of sport goes from being cool to uncool. It is worth notice that it was often the same groups giving Gary cool and uncool comments about his sporting attributes.

Sophie recorded 76 cool comments and 53 uncool comments from all the groups. The main reasons Sophie was considered to be cool was because she took part in Gymnastics, she was well liked at school and she had coped with the death of her

mother and had taken on a lot of responsibility around looking after the family and supporting them. Her uncool traits mainly focused around her having old technologies such as an old mobile phone and a TV without Freeview meaning she could only use it to watch DVDs. She was a Librarian at school and enjoyed reading, both of which were considered to be uncool and also she was considered to be uncool by association as many groups commented on her being uncool because her dad had become an alcoholic and was struggling to cope since her mum died highlighting that she was considered cool for coping with this tragedy and supporting her family but her dad not coping so well made her uncool. This aspect, of associated cool, is returned to later in this discussion.

Turning to the uncool personas, Natacha recorded 47 cool comments from all the groups and 97 uncool comments. Natacha was mainly considered to be cool because she was multilingual and enjoyed learning, in particular about world news and events. The rest of the cool comments about Natacha appeared almost to be focused on sympathy with groups commenting on how she was a 'normal girl' trying to make the best of her situation and trying to fit in within a new culture. This opens the door to a potential new category of cool as 'sympathetic cool' that has not yet been looked into. This could be a similar concept to the phenomenon of certain things, like Gary's sport, tipping from being really uncool to being really cool. Further work will be needed in this area. Natacha was considered to be uncool again because she had a lot of old technologies such as a simple/old Pay As You Go mobile phone and an old laptop. She lived in social housing and had very strict parents who severely restricted her ability to socialize and make new friends. Similarly to Sophie, she spent a lot of time in the Library, which was again remarked on as being uncool.

Wayne, the most uncool in the set, recorded 27 cool comments from all the groups and 148 uncool comments. Practically all of the cool comments about Wayne were because he had a lot of the latest technologies such as an IPhone, LCD television, an Xbox and a Laptop. There were no cool comments about Wayne as a person. Although a few groups considered Wayne cool for having the latest technologies he was also considered to be uncool due to the fact the cool technologies were acquired through illegal methods or that he had all the cool technologies even though his family weren't working and were claiming all possible social benefits. The fact Wayne's family lived in social housing and claimed benefits was seen as one of the major reasons he was uncool although this, much like Sophie's association, was interesting as there was nothing Wayne could personally do to change this aspect of his habitat. His anti-social

habits were considered to be uncool with comments about him smoking, joyriding and tormenting people on Facebook appearing regularly. His lack of interest in anything and lack of ability in school made him very uncool as did the amount of trouble he was in with the police.

From the rich data analysed for these four personas we can start to draw out some cool and uncool traits. Old technologies appear to be uncool, particularly old mobile phones and Pay As You Go mobile phones. These were universally seen as uncool whether the persona him/herself was considered to be cool or uncool as a whole. Owning the latest technologies is considered to be cool showing that perhaps older technologies which can potentially be seen as being cool in terms of their retro-ness is not relevant to this group. Social housing and claiming benefits came across as uncool and also reading and Library activities came across as uncool although Natacha being able to read two different languages was considered cool. Being good at something, whether it be sports such as football and gymnastics, or being a language, appears to be cool as long as your whole life does not obsess around it. Trying hard at school and being good academically appears to be cool, which was a little unexpected, and being well liked was also considered cool.

6. New Insights on Cool

These observations lead to two new observations on cool – these are discussed within the framework of cool from (Read et al., 2011). This framework, which was primarily derived from the literature on cool, and was validated in a design study with teenagers in which teenagers mapped out the contents and aspects of their dream bedrooms, identified six characteristics which were rebelliousness (Pountain and Robins, 2000), retro (Nancarrow, Nancarrow and Page, 2002), innovative (O'Donnell and Wardlow, 2000), authentic (Nancarrow, Nancarrow and Page, 2002), rich (O'Donnell and Wardlow, 2000), and anti-social (Pountain and Robins, 2000) .

In terms of rebelliousness, which is identified in the literature as being a trait of cool, from the understanding of Wayne, by the teenagers in our study, there appears to be a line beyond which behaviours are not cool. On a 4-point scale from total compliance, through grudging compliance, non-harmful rebelliousness to criminal rebelliousness, cool probably belongs somewhere in the middle and quite possibly, based on the work

described here, in the space of non-harmful rebelliousness. This space is mapped out in Figure 5.

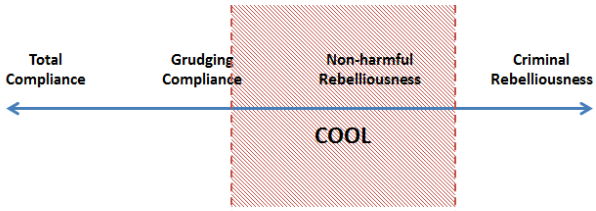

Figure 5. The compliance cool zone

In terms of sociality, two themes emerge – one is social activity with peers and the other is social activity with others. It is commonly understood, and hinted at in (Fitton et al, 2012) that teenagers are extremely social with their own peer groups whilst also antisocial with others. In figure 6 we show where cool might sit, which is neither entirely antisocial nor pro social with non peers (which is where some of Wayne's antisociality lies) but is highly social with peer groups.

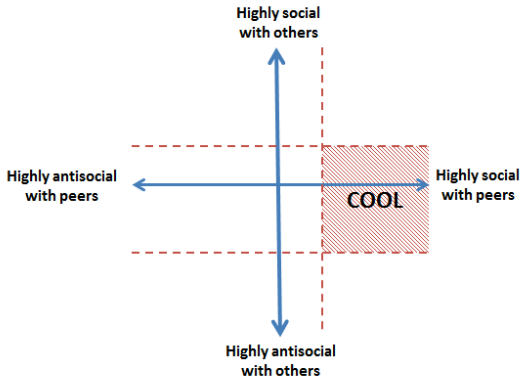

Figure 6. The social cool zone

Retro does not apply to old versions of things that currently have newer versions – this may explain why an old phone is uncool. Retro probably needs something either further back, or something that no longer exists. Innovative, as in surprise activities or actions, for example being bi-lingual, may not necessarily be about an item. It can be as unusual or stand out behaviour. The coolness of having the real thing (authenticity) and having the expensive products (so long as they are not gotten by ill means) is supported in this study. Two new characteristics, sympathetic cool and associated cool have been identified and more work is needed on these. The two are potentially

related as they refer to those aspects of a teenager's life over which he or she has little control. They also suggest that teenagers, especially in terms of sympathetic cool, are forgiving of associated aspects where these might be considered uncool. Whilst associated aspects of cool cannot be designed into interfaces or products, there might be a case for designing unsavoury associated aspects out of products and services.

7. Conclusion

This study has shown that using personas to explore teenage habitats and behaviours can work. It demonstrates that teenagers can arrange personas in order of cool and shows that this process, of determining cool, can shed some light as to the boundaries between cool and non cool and has confirmed some of the literature on cool. The findings from the teenage study help identify traits and possessions in other teenagers that are considered to be cool or not cool without bringing into question any prejudices that may have appeared if real teenagers had been used.

The need to refine the characteristics of cool further has been evidenced through the identification of cool traits that did not fit into the six categories, particularly with respect to social cool which has been identified in previous studies and again here but is not yet fully understood.

Further studies plan to have interview studies with teenagers to better understand why these choices are made, and a large study, with more teenagers is being undertaken to explore gender effects and age effects. Work is progressing on taking these understandings and extracting design learnings from the work.

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