Abstract
This research paper considers aspects of digital inclusion in relation to public interactivity by looking at ‘baseline’ interactions in public space. Using preliminary observations the effect of mobile phones on everyday experiences of public interactivity is considered. In particular attention is drawn to intergenerational differences when designing interactivity for public spaces. Using preliminary participant observations the techno-social behaviour of each generation are differentiated in terms of social norms around public mobile phone use. Implications are drawn in relation to the design of interactive public spaces, highlighting the need for an approach that includes diverse generations.

Author Keywords
Intergenerational contact; mobile phones; public interactivity; digital inclusion

Introduction
When attempting to augment public interactivity through design it is important to have an understanding of the underlying dynamics that go towards determining the nature of public spaces. Here we
consider the ubiquity of mobile phones in defining the social and technological affordances of such spaces and the ways that different age groups engage with these opportunities. The pervasiveness of the mobile phone is hard to ignore with an estimated 70% of the world’s population now owning one [8]. From its inception it has had a profound effect on social conduct in public spaces with many viewing its appearance as an annoying intrusion [7]. The acceptability of mobile phone conversations in the midst of ongoing communal activities still remains a contested social norm [4] and something which seems to exist across cultures [2]. They have become ever present motifs of modern public life competing for the common grounds of intersubjective awareness and disrupting the social norms that previously existed in public spaces. Understanding how these technologies define the nature of public space is important if we are to augment this space with further interactive technology. Community displays which are often hailed as the most imminent form of future public interactivity will often enlist mobile phones as conduits for their interactivity [1]. In this context disparities of access between generations are beginning to be recognised [6] but more needs be understood. In this paper we consider these disparities in more detail by looking at generational differences in terms of ownership of the physical device. It is only when we consider the everyday attitudes and social practices that accompany mobile phone use that generational differences start to become apparent. 79% of the 16-24 age group consider their mobile phone to be their main point of contact with others [9]. Studies across Europe have shown that teenagers and young adults are highly dependent on their mobile phones and emotionally attached to them, keeping them at hand constantly and frequently using them in public spaces [11]. In contrast only 12% of those aged 65-74 consider the mobile phone as their main route to social contact and only 5% of those over 75 [9]. Studies exploring older people’s attitudes towards mobile phones suggest that they see them as very different kinds of devices. They are principally employed to ensure safety and security on specific journeys outside of the home and as such are generally not used for extended conversations or even turned on when not in use [5]. One would suspect that these quite distinct interpretations of purpose would be mirrored in differing social norms between the youngest and oldest generations and their corresponding use in public space. So far there is little research to verify whether these differences exist, whether they are age related and if so how they are reconciled (or not) between generations in public spaces.
Methodology

In order to understand the intergenerational dynamics of mobile phone use as a background element to public space a pilot observational study was embarked upon with a view to documenting each generation’s technosocial practices in relation to public mobile phone use. Investigations employed participant observations in public spaces in the city of Brighton in the South of England. Broad generational patterns of mobile phone behaviour were identified in terms of accompanying body language, use of personal space and other effects relating to face to face interaction. Distinct generations were identified in line with Erikson’s life stages [3] with the following broad categories: children (under 13); adolescence (13-18); young adulthood (18-35); adulthood (35-65) and old age (65+). Observations were carried out in four different public locations 1 for a total of 21 hours from 10am and 3pm between 19th June 2012 and 10th July 2012 involving approximately 120-150 people. No children were observed using mobile phones during this study.

Generational Behaviours

ACROSS THE AGES: DEGREES OF MULTITASKING

A clear difference was observed in terms of each generation’s ability to interweave their use of mobile phones with other on-going (and off-device) activities. In locations where adolescents and young adults were walking (or cycling) through the city they would continue to do so whilst texting or talking on their mobile phones, showing a high degree of divided attention and a propensity to multitask. In contrast old aged users in these same locations were more likely to stop everything else they were doing in order to talk or text. Adults (those between 35 and 65) showed varying degrees of multitasking ability when using their phones often walking slower or sitting down when using their phones.

ADOLESCENTS (13-18): THE SEAMLESS SOCIAL NETWORK

Gatherings of teenagers in public places were often accompanied by simultaneous use of mobile phones, iPods and/or portable gaming consoles. This was observed with college students (aged 15-17) travelling on the train (in location 3) and in the centre of the city (in location 4). In these gatherings they would sit or stand in a circle with each individual seemingly focussing their attention on their individual screens. Whilst this might appear to be an isolating activity in terms of removing direct eye contact from one another in other ways the sense of a social meeting was maintained. Whilst their visual attention may have been occupied their auditory attention remained available to one another with conversations continuing despite ongoing and simultaneous texting or updating of social networks. At times they would share their online activities with one another creating conversations that incorporated (absent) others via their recent text and photo postings to social networking sites. This resulted in what might be called a ‘seamless social network’ in which online social activities were integrated into immediate person to person (rather than face to face) gatherings and vice versa.

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1 Four different locations were used as the basis for initial observations: 1) a paved walkway and sitting area adjacent to a well frequented local landmark (the Royal Pavilion) 2) a bus travelling through the centre of the city 3) a train travelling into the centre of the city and 4) a communal space and sitting area outside the public library in the centre of the city.
YOUNG ADULTS (18-35): PHONE AS COMPANION AND THE PUBLIC/PRIVATE BUBBLE

Groups of young adults in public did not engage in the seamless social networks of their younger counterparts but tended to exclude those present from their conversations by removing eye contact and orienting their bodies away from any congregation whilst talking on their mobile phones. Mobile phone conversations were not curtailed because of this exclusivity but were accepted by the rest of the group without complaint creating a public/private bubble. For those receiving calls there was variation in the prioritisation of mobile phone voice calls over immediate face to face interactions. Different levels of discretion were used and this would dictate how much they lowered their voice, avoided eye contact and/or withdrew from the centre of the congregation whilst talking on their phone. Text messaging was less common amongst this group when they were out with others in a public space. Young adults were the most visible users of mobile phones in public places. A distinctive aspect of their presence in these places was that they were often seen alone. In these instances the mobile phone was carried in hand and displayed as a symbol of social status implying continual social availability and connection, i.e. they were not really 'alone'. In such a way the mobile phone appeared to act as a constant companion for many solitary young adults.

ADULTS (35-65): EFFICIENCY IN BETWEEN MOMENTS

Mature adults were observed using their mobile phones at moments in-between activities or places. Mobile phone activity (whether texting or talking) occurred at particular thresholds just prior to entering buildings such as upon leaving the library or entering a convenience store (both in location 4). This group were more likely than other age groups to be seen talking on their phone when alone. Phone use occurred during times that would have otherwise been taken up with 'mindless' activity such as walking and which made efficient use of available thinking time.

OLD AGED (65 +): DISCRETE USE

For the most part older people’s use of mobile phones was either non-existent or hidden from public view. Out of all the older people observed only three of them were seen using their mobile phones in public. On each of these occasions their use of the technology was what one would call 'discrete'. They would stop whatever else they were doing, take their phone out of a bag or pocket, use it for a distinct purpose and then return it. This appeared to be driven by a need to attend to a single task at a time but was compounded by difficulty in seeing the mobile phone when moving. Some older adults would put on glasses or adjust them in order to read and operate the phone. Those phone conversations that were observed were short and to the point.

INTERGENERATIONAL INTERACTION

Throughout the observations social contact between strangers of different generations was seen very rarely. This was certainly true in terms of conversation but also in terms of the nonverbal precursors that one would normally expect to precede conversation. On the whole different generations appeared very tolerant of one another’s mobile phone behaviour but common ground for conversation did not emerge often. The only time this was seen to happen was with a baby and an older person on the bus with the mother operating as intermediary and ‘translator’.
Implications for the Design of Public Interactivity
These preliminary observations suggest important differences between generations in terms of their public use of mobile phones and correspondingly their definitions of what constitutes ‘public’ space. Understanding these differences is important if we are to engage all members of a given community equally through interactive spaces. Those spaces which harness the ubiquity of mobile phones for public interactivity will have to accommodate these different uses and expectations in relation to mobile phone use if they are to be truly inclusive spaces. Similarly interactive spaces and displays which make use of more direct interactions such as gesture and touch will have to compete with these background dynamics if they are to engage public attention at all. An underlying assumption for both approaches is that public interactivity can be encouraged by providing a common ground for social interaction or social ‘triangulation’ opportunities [6] at the interface. Whilst it would be possible to tailor public interactivity to a particular generation the significance of an intergenerational context in defining triangulation possibilities should be acknowledged as significant during design. This study of intergenerational ‘baseline’ interactions is ongoing and whilst some basic categories of generational behaviour have been described here more research needs to be done to ascertain how these differences are reconciled in public space.

References