

Communications in the 21st Century

Kristóf Nyíri (ed.)

Integration and Ubiquity

**Towards a Philosophy
of Telecommunications
Convergence**



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Sandra Pöschl
Nicola Döring

Personality and the Mobile Phone

Character-Based Differences
of Usage and Attitudes
towards Mobile Communication

"The mobile phone – your personality in your pocket."

www.itwales.com

Quotations relating to personality and mobile phones can often be found in advertisements of service providers or distributors of end devices. Normally, features for personalizing the mobile phone are meant, for example ringtones, logos or faceplates. But what exactly is meant by personality in relation to mobile phone use?

When we take a look at the current state of research, we can see that a lot of work has already been done on the use of mobile phones and how mobile communication is evaluated by its users. A whole range of aspects has been taken into account: From the changes in our individual everyday life to the rearrangement of our society due to mobile availability. The impact of the mobile phone has been studied in various social relationships: family (and especially children and youth), colleagues at work and friendships.¹

Those changes in individual life and in society are highlighted by two import topics: Firstly, a lot of studies focus on the coordination of our lives (for example on "micro-coordination" and "hyper-coordination"²). It

¹ For an overview see Hans Geser, "Towards a Sociological Theory of the Mobile Phone", in A. Zerneck, A. Picot, K. Scrape, J.-C. Burgelman, R. Silverstone, V. Feldmann, C. Wernick and C. Wolff (eds.), *E-Merging Media: Communication and the Media Economy of the Future*, Berlin: Springer, 2005, pp. 235–260; Leslie Haddon, *Information and Communication Technologies in Everyday Life: A Concise Introduction and Research Guide*, Oxford: Berg, 2004; James E. Katz and Mark Aakhus (eds.), *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge: Cambridge University Press, 2002; Richard Ling, *The Mobile Connection: The Cell Phone's Impact on Society*, San Francisco: Morgan Kaufmann, 2004.

² Richard Ling and Birgitte Yttri, "Hyper-Coordination via Mobile Phones in Norway", in Katz and Aakhus (eds.), *Perpetual Contact*, pp. 139–169.

has even been suggested that the flexibility and mobility in our lives due to the mobile phone have lead to a change in how people experience space and time: new patterns of coordination and social networks occur.³

The second topic is the use of mobile telephony in public places. Because of the possibility to make calls everywhere, a private part of our life takes place in public space. This results in an incongruity between our physical presence in public and our being occupied with, say, a private call.⁴ Meanwhile, there has emerged some kind of etiquette of when and how to make mobile calls in public.⁵ Mobile phone use in public concerns users of mobile phones as well as bystanders witnessing the communication. For both parties, the use of the mobile phone in public leads to certain perceptions, attitudes, motives, emotions and behaviour patterns. They can be observed to apply certain strategies to manage the call when being at the same time engaged with another person face to face, and show certain emotional reactions like being impatient.⁶

³ Compare Richard Ling and Scott Campbell (eds.), *The Mobile Communication Research Annual*, Volume I: *The Reconstruction of Space & Time through Mobile Communication Practices*, Edison, NJ: Transaction, in press.

⁴ Leopoldina Fortunati, "The Mobile Phone: Towards New Categories and Social Relations", *Information, Communication & Society* 5 (2002), pp. 513–528; Amparo Lasén, *A Comparative Study of Mobile Phone Uses in Public Places in London, Madrid and Paris*, Guilford: DWRC, University of Surrey, 2003; Ged M. Murtagh, "Seeing the 'Rules': Preliminary Observations of Action, Interaction and Mobile Phone Use", in Barry Brown, Nicola Green and Richard Harper (eds.), *Wireless World: Social and Interactional Aspects of the Mobile Age*, London: Springer, 2002, pp. 81–91.

⁵ Richard Ling, "'One Can Talk about Common Manners!': The Use of Mobile Telephones in Inappropriate Situations", *Teletronikk* 94 (1998), pp. 65–76; Murtagh, *op. cit.*

⁶ For more details see Kathleen M. Cumiskey, "'Surprisingly, Nobody Tried to Caution Her': Perceptions of Intentionality and the Role of Social Responsibility in the Public Use of Mobile Phones", in R. Ling and P. Pedersen (eds.), *Mobile Communications: Re-negotiation of the Social Sphere*, London: Springer, 2005, pp. 225–236; Joachim R. Höfllich and Julian Gebhardt, "Mobile Kommunikation und die Privatisierung des öffentlichen Raums – Ergebnisse einer explorativen Studie", in J. R. Höfllich and J. Gebhardt (eds.), *Mobile Kommunikation – Perspektiven und Forschungsfelder*, Frankfurt/M.: Peter Lang, 2005, pp. 135–157; Lee Humphreys, "Cellphones in Public: Social Interactions in a Wireless Era", *New Media & Society* 7 (2005), pp. 810–833; Katz and Aakhus (eds.), *Perpetual Contact*; Lasén, *op. cit.*; Ling, "'One Can Talk about Common Manners!'".

⁷ Steve Love and Joanne Kewley, "Does Personality Affect Peoples' Attitude towards Mobile Phone Use in Public Places?", in Ling and Pedersen (eds.), *Mobile Communications*, p. 274.

Interestingly, research on the influence of individual characteristics on the use of mobile phones is still at the beginning.⁷ However, personality has a causal effect as to how a person relates him- or herself to the world. It is manifested in behaviours, attitudes and emotions.⁸ Thus it can explain different exposures to mobile phone use and its evaluation. Particularly the *Big-Five-Model* of Personality is relevant for research. It postulates five central dimensions of personality: *Extraversion*, *Social Agreeableness*, *Conscientiousness*, *Emotional Instability* (or *Neuroticism*) and *Openness to Experience*. In several studies, the influence of personality traits on the use and evaluation of mobile phone communication could be detected.

For example, problem mobile phone use (like calling without a headset while driving a car) could be associated with Extraversion and Neuroticism.⁹ Some research also hints at a correlation between Extraversion and SMS use, meaning that introverted people prefer SMS to voice telephony for communication, whereas other studies failed to verify the effect.¹⁰ Furthermore, an influence of Extraversion and Neuroticism on the perception and evaluation of mobile phone use in the presence of bystanders was discovered. Extraverts tend to listen to the conversation, whereas introverts feel rather embarrassed by having to witness private talk.¹¹ Also, introverts seem to feel more uncomfortable as bystanders than extraverts do, and neurotic individuals seem to have greater problems making calls in the presence of unknown bystanders than more stable people do.¹²

The studies referred to examined the influence of isolated personality traits. Such an approach, however, fails to take into account a very important aspect: Personality characteristics never exist independently of each other, but are organized in certain configurations within the person. In

⁸ Charles S. Carver and Michael F. Scheier, *Perspectives on Personality*, 3rd ed., Boston: Allyn and Bacon, 1996.

⁹ Adrianna Bianchi and James G. Phillips, "Psychological Predictors of Problem Mobile Phone Use", *CyberPsychology & Behavior* 8 (2005), pp. 39–51.

¹⁰ Simon Raess, Christine Kiener and Salomé Schneider, "Sag's doch schnell per SMS" – Studie zur Anwendung von Kurzmitteilungen, Bern: Universität Bern, Institut für Psychologie, 2002; Donna Reid and Fraser Reid, *Insights into the Social and Psychological Effects of SMS Text Messaging*, 2004, <http://www.160characters.org/documents/SocialEffectsOfTextMessaging.pdf>.

¹¹ Steve Love and Mark Perry, "Dealing with Mobile Conversations in Public Places: Some Implications for the Design of Socially Intrusive Technologies". Paper presented at the CHI 2004, Vienna, Austria, 2004.

¹² Love and Kewley, *op. cit.*, pp. 273–284.

several studies, three main prototypes of personality have been proposed: *Resilient*, *Overcontrolled* and *Undercontrolled*. Resilients generally show a well-adjusted profile with low Neuroticism and at least intermediate values on the other four dimensions. Overcontrollers tend to show high Neuroticism and low Extraversion, and Undercontrollers have low Conscientiousness and Agreeableness.¹³

In accordance with the desiderata shown in current research, the aim of this study was to explore the reciprocal effects of personality prototypes, mobile phone behaviour patterns and attitudes towards mobile phone use. Pursuing an exploratory investigation, we chose to formulate, instead of hypotheses, the following research question:

Are there any reciprocal effects between personality prototypes and mobile phone use and its evaluation? What is the relevance of those reciprocal effects?

Method

To answer our research question, a survey on personality and mobile phone use was conducted at the Ilmenau University of Technology in October 2006, using the measures described in the following paragraph.

Measures

After going through the relevant literature, identifying theories developed and studies conducted, a questionnaire was designed. It was structured into three sections: In addition to demographic data, firstly mobile phone use statistics (like the possession of mobile phones, frequency of use, costs and applied services and applications) were enquired into. The following section dealt with attitudes towards mobile phones (ranging from concern about radiation all the way to the purposes the mobile phone fulfils) and with mobile phone behaviour patterns (like strategies to manage availability, or reactions to mobile phone use in public). Thereby, the questionnaire addressed the aspects of micro- and hyper-coordination and public phone use described in the literature review. Thirdly, the di-

¹³ Philipp Y. Herzberg and Marcus Roth, "Beyond Resilients, Undercontrollers, and Overcontrollers? An Extension of Personality Prototype Research", *European Journal of Personality* 20 (2006), pp. 5–28.

¹⁴ Peter Borkenau and Fritz Ostendorf, *Neo-Fünf-Faktoren Inventar (NEO-FFI) nach Costa und McCrae* [The Five Factor Inventory], Göttingen: Hogrefe, 1993.

mensions of the Five-Factor Model of Personality were assessed using the German NEO-FFI questionnaire.¹⁴ The questionnaire ended with items for sociodemographic data.

Sample

All subjects were undergraduate students. Convenience sampling was used in various classes in media and communication science, where subjects were asked to volunteer, leading to a final sample of $N = 211$ subjects. The participants showed a mean age of 21 years ($SD = 2.20$), 94 participants were male, 117 were female.

Results

Description of the Prototypes

Four valid personality prototypes were detected by using a statistical clustering procedure.¹⁵ Two of them could be matched to prototypes from representative studies: *Resilients* and *Overcontrollers*.¹⁶ Resilient people, on the one hand, were characterized by a low score on *Neuroticism*, high values on *Extraversion*, *Openness to Experience* and *Agreeableness*, and a slightly positive score on *Conscientiousness*. This represents a personality prototype of people who are emotionally stable, outgoing, relaxed, self-confident and get along well with others. In short, they are quite satisfied, successful and happy. *Overcontrolled* people, on the other hand, showed a high level of *Neuroticism*, slightly negative values on *Extraversion*, low and moderately low scores of *Openness* and *Conscientiousness*, as well as a high level of *Agreeableness*. This pattern indicates a personality prototype which is emotionally unstable, somewhat introverted, not open-minded, without the drive to achieve great things in life, but at the same time getting along with others quite well. They are not very happy, but have in a way

¹⁵ For more information on the clustering procedure compare Jens Asendorpf, Peter Borkenau, Fritz Ostendorf and Marcel A. G. van Aken, "Carving Personality Description at its Joints: Confirmation of Three Replicable Personality Prototypes for Both Children and Adults", *European Journal of Personality* 15 (2001), pp. 169–198.

¹⁶ The other two clusters resembled the Undercontrolled and the Reserved prototype (compare Herzberg and Roth, *op. cit.*), but not sufficiently to justify an appropriate classification.

come to terms with their life (compare Figure 1).

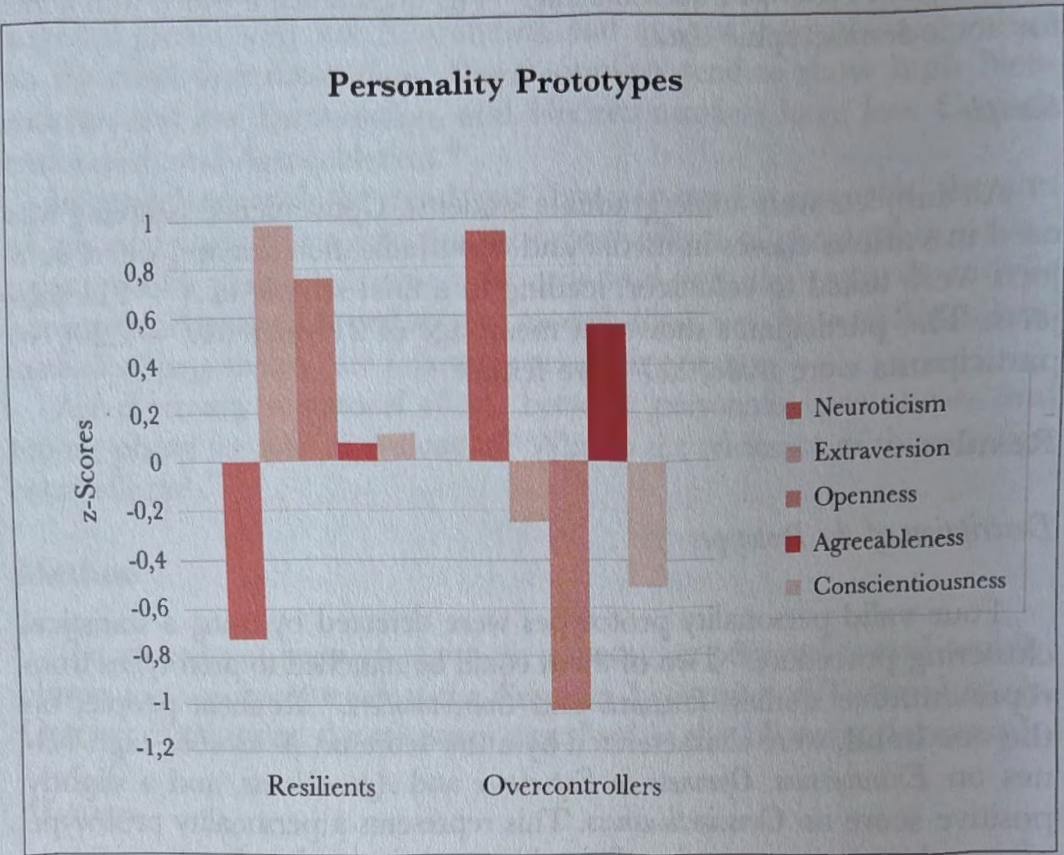


Figure 1
Configuration of personality factors within the Resilient and Overcontrolled prototypes. In order to answer our research question, we compared the two prototypes and tested for differences in mobile phone use and its evaluation

Differences of Usage and Attitudes towards Mobile Communication¹⁷

First of all we discovered that in most aspects the prototypes did not differ. However, some interesting differences concerning use of, and attitudes towards, mobile phones could be found.

We discovered differences in the evaluation of mobile phone use on a very general level. Resilients as well as Overcontrollers acknowledged that the mobile phone facilitates everyday life and contributes to more flexibility and independence. Whereas Overcontrollers agreed to this a

¹⁷ For details concerning the statistical analyses and descriptive and testing statistics please contact Sandra Pöschl at sandra.poeschl@tu-ilmenau.de.

bit more than Resilients, the latter used the mobile phone more often to feel more secure while being out and about.

Secondly, the two prototypes differed concerning the adoption of mobile phones. Although the effects are rather weak, it can be seen that Overcontrollers feel more comfortable with the rapid development of mobile technologies and experience less problems when learning to use a new mobile end device.

A further interesting effect was that the prototypes differed in terms of managing availability. Both personality prototypes are not especially keen on distributing their mobile phone number, but Overcontrollers are less reluctant to register it in a telephone directory. At the same time, Resilients tend to suppress caller identity rather more than Overcontrollers. Further, Overcontrollers agreed stronger than Resilients to switching off their mobile in important meetings and also doing so when they do not want to be available.

Besides, we found differences in attitudes concerning availability. One dimension we found was evaluation of unavailability and simultaneous concern for communication partners (e.g. calling back as soon as possible after a missed call, or getting anxious when not being able to reach someone). Whereas Resilients scored slightly below average on this dimension, Overcontrollers showed an above average level. In summary, it seemed that Overcontrollers are more aware of mobile (non)availability and its positive and negative sides respectively.

Lastly, a difference in some sort of problem mobile phone use was discovered. Resilients stated that they would reduce the number of made calls if they had to face high cost, whereas Overcontrollers were not so determined.

Conclusion

Although personality dimensions as influencing factors on shown behaviour are regarded with caution in the context of mobile phone communication, differences between personality prototypes can be indicated. It seems to be the case that mobile phone use is of greater importance to Overcontrollers than to Resilients. In general, they evaluate it more positively than Resilients, and are more prepared to use it despite of potentially high cost. Adoption appears to be more easy for them and they are more conscious of constant availability and strategies to manage it. At the same time, they get anxious more easily when not reaching communication partners.

When we recall the personality dimensions characterizing the two

examined personality prototypes, the results fit quite well. Resilients are emotionally stable, convivial and rather relaxed, whereas the Overcontrolled are introverted and annoyed more easily, but at the same time show high agreeableness. We would assume Resilients to be more open to new technologies, but the Overcontrolled are more at ease to adopt a new mobile end device. However, mobile phones nowadays are a rather self-evident and not a brand-new technology. At the same time, Overcontrollers can use the mobile phone to manage their everyday life. They might – in contrast to the more relaxed Resilients – appreciate the possibility to have more control of daily routines by being able to react more flexibly to changes. Last but not least, the personality patterns of the prototypes are quite well reflected in their handling of availability. The emotionally more unstable Overcontrollers are more distressed by not reaching someone and at the same time are sensitive of mobile phone free time slots like meetings and private time. Thereby, on the one hand, they show some regard towards the people they otherwise might disturb, and sometimes need to relax from the strain of constant availability.

This study is a first step to explore and investigate the influences of our personality on the use and evaluation of mobile phones. Further research in this field may lead to a better understanding of why the mobile phone is widely used, in which circumstances we do or do not use it, and what our motives are.