

Editorial Preface

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Dear readers,

This is my first preface as Editor since I accepted the kind invitation of Dr. Arthur Tatnall, the creator and Editor of the journal during the last eight years, who recommended me to IDI. It took me quite some time to realize the enormous value and importance of what he, the Editorial Board and supporting IDI team did during that period and the responsibility that now I assume. Dr. Tatnall was also so kind to help me with the preparation of this issue, and he practically did almost everything, leaving me enough time to orient myself into new duties.

This issue includes five articles. In the *introductory article* Arthur Tatnall briefly outlines the content of the all 117 articles being published in the journal during the last seven years. In this unique piece of work he summarizes the content of the seven volumes of journal and outlines the historical path of its evolution, together with an attempt to classify the published papers in several categories according to their topics. Tatnall shows that the first few issues reveal the dominance of ICT as research topic and the efforts of practitioners in the field to apply ANT approach to different types of subject (for example innovation and technology diffusion). They include both interesting case studies applying ANT approach in the study of ICT innovations in finance and banking sectors (that is to become a small but persistent topic during the years), in medical care, etc., as well as more methodologically oriented paper discussing the added value of ANT to the other existing approaches such as Rogers's Innovation Diffusion, Technology Acceptance, or Social Network Analysis. I would like to mention especially the Innovation Translation model, presented in two articles of Dr. Tatnall, which itself can be considered as specific application of classical ANT to the field of ICT. There he demonstrates the potential of this model to complement and in some cases to provide an alternative to other approaches.

Already in the first years of journal existence, however, we see that ICT as dominant area is complemented with interesting articles exploring ANT approach in other fields such as health - even if this often means ICT in health, education, cross-cultural dialog and communication. I would like to mention here the interesting article of Bielenia-Grajewska who consider the translation process and innovations in it as complex ecosystem, comprising both human and non-human entities.

The historical outline of Arthur Tatnall reveals how IJANTTI gradually emerges as kind of hub, where the ANT researchers from different geographical area can present their articles – from Australia and South-East Asia, South Africa and Middle East, UK and continental Europe, North and South America. We see a truly international journal, which became a platform for interesting interactions among researchers with different background and subject of study, able to present and discuss their ideas, helped by the common ANT methodology they share. In fact ANT methodology will soon become one of the key topics of the journal and during the years we see the regular flow of theoretical papers that are discussing the problems ANT approach is facing in different kinds of application – to mention the above mentioned article of Tatnall comparing Innovation Diffusion and Innovation Translation models, Rimpilinen on 'epistemology of ANT' and its principle of symmetry,

or the comparison between ANT and Activity Theory done by Ekundayo and Andrade in third issue of Volume 3.

The introductory paper allows also tracing the persistent dialog between adherents of ANT and representatives of other research traditions studying technology such as hermeneutics of technology, activity theory, or social network analysis. I would like to mention especially the special issues in the last volume of 2015, where the guest editor Stoyan Tanev offers articles that mirror ANT with phenomenography, consumer culture theory, activity theory, and 'design in use and practice' theory.

At the end of its paper Arthur Tatnall provides brief classification of 117 articles among several categories according to their topic, where the trends outlined above receive their quantitative expression: ICT comprises a little less than 1/5th of the articles; healthcare, methodology of technological innovations and education about 15% or little less, followed with categories of 'science, engineering and education' and 'business and government' with 10%, eight articles on purely theoretical aspects of ANT, and separate articles on several other topics. As the author himself mentions, this classification is only one of the possible, since for example through the entire period we have number of **quite** interesting case studies, where the potential of the ANT approach in the analysis of particular phenomena is revealed at its best – Rayna, Struikova and Landau paper on the adoption of digital audio players, Tatnall article on adoption of Visual Basic programming language in Australian Universities, Muniesa article on computerization of stock exchange, Shrifzadeh articles on the use of climate information by Iranian farmers, Spoehrer article on 'domestication' of cochlear implant, Lyamu and Hamunyela analysis of healthcare to nomadic patients in rarely populated areas of Namibia, Grasic and Uden article on the application of Delay Tolerant Network Technology developed for deep space into ordinary users in Arctic regions of Sweden, to mention just a few. And I would like to add to this some special volumes applying ANT or related approaches to particular technologies such as human-technology interaction or 3D printing & new space entrepreneurship.

I will conclude the presentation of the introductory article with one more evidences it provides, and which is both surprising and inspiring – about the remarkable research activity of its author! In the seven volumes of the journal we found 14 articles of Arthur Tatnall - theoretically and methodologically oriented or applying ANT to particular subject, most of which being published in co-authorship with Australian or foreign researchers. This reveals the IJANTTI the founder and Editor as personal embodiment of the journal's core values.

The introductory paper is followed by *three methodological papers*, all inspired by the application of ANT approach to particular cases.

Based on the case study of Bitcoin, Bill Davey and Arthur Adamopoulos paper presents an interesting experience in bridging ANT and Grounded Theory (GT), demonstrating the potential of the latter's tool to be integrated into ANT methodology in situation where the researchers have to cope with large amount of qualitative data. After brief outline of the core of GT research methodology and its juxtaposition with ANT, the authors reveals their experience in applying GA tool to the huge amount of data available online data since the establishment of Bitcoin. They show how skillfully manage to overcome the key hurdle of GA tool designed to human actors only, using it to identify and trace the interactions of all socio-technical actors involved – both human and non-human. Thus they offer a promising research tool that compliments the classical semiotic approach of ANT in situations where huge number of heterogeneous actors is involved.

The article of Fernando Toro and Arthur Tatnall provides an elaborated ANT based methodological framework for studying the societal impact of the mass introduction of computers in Chilean schools and how this challenges the traditions and culture of Mapuche as specific ethnic minority in the country. Designed as preliminary step to the field work still carried out, the methodology includes in-depth outline of the historical and organizational environment the introduction of ICT in Chilean schools takes place. It differentiates between designed outcomes and the variation of local adoption of ICT in different setting (regional, ethnic, etc.) and the actant-ness of students themselves that are able to 'translate' the ICT technology introduced from above. In the last section of the paper the

authors design an ANT tool aiming to analyze the specificities of the adoption of ICT in the regions and schools where Mapuche students are dominant group. It is based on earlier studies of Tatnall on the societal impacts of computers' introduction in education and includes heterogeneous set of actors, among them ICT technology, Mapuche culture, Chilean citizenship and Chilean culture. It is yet to see the results of the application of this methodology during the collection and analysis of the field data.

The paper of Meng Yoe Tan from Monash University in Malaysia provides an important theoretical and methodological overview of the existing studies and approaches to online religion to reveal the potency of ANT as both conceptual tool and research methodology in studying religious practices in Internet and their complex interactions with daily 'offline' practices. Critically analyzing the existing literature on 'online' religious experience (or practicing religion via internet), the paper systematically questions some well-entrenched dichotomies in our perception of internet (such as online-offline, real-virtual, authentic-superficial). It uses ANT approach to argue about the necessity to go beyond of the inherited Cartesian schemes and to consider Internet not just as "room" and 'space', but rather as peculiar 'state of being', where 'online' and 'offline' partially overlap. The author identify two important characteristics of ANT that are of special significance to the issue – it's *empirical orientation* through a detailed description of the data collected, and it's *symmetrical approach* and the focus on associations and networks that allows an effective navigation on the 'non-deterministic path' where both media and peoples are actors, and where both online and offline realms segue into reach other. Thus using ANT, the author claim we are capable to "carefully chart how experience and practice in a broader context allows us to infer on spiritual experience... in cyberspace". As a result, the paper offers an advanced methodology that deepens our understanding of religious practices in modern internet mediated religious practices in everyday life that proved to be also capable to bring people into religious communion and to achieve authenticity of their subjective experience.

The concluding article of Quazi Omar Faruq and Arthur Tatnall focuses on the newest ICT application in primary healthcare. It provides some additional arguments that legitimize the usefulness of Innovation Translation model as particular version of ANT approach to ICT innovation. Inspired by the 1986's seminal analysis of Michel Callon of the scallops at St. Brieuc Bay, the Innovation Translation model distinguishes four moments or stages in technology adoption, that are particularly suitable in understanding the process of introduction of ICT innovations in healthcare and other fields – problematisation, intersement, enrolment and mobilization. Each stage presupposes research efforts to identify the actors and mediators involved and to trace the transformation of their interactions up to the disappearance of some actors and emergence of new ones. The model has been applied by Dr. Tatnall during the last ten years to number of other cases. The paper steps on this experience and focusses on the redefinition of the role of medical General Practitioners (GPs) and patients during the last several decades with the gradual introduction of new ICT technologies in healthcare, backed by advancements of ICT infrastructure and ICT mediated communications at societal level. The authors point to the crucial role of the infrastructure and changes in health legislations encouraging the use of ICT tools in daily medical practices and that are potentially able to soften the problem with diminishing number of medical doctors and ever increasing bulk of paper-based records. They also point out to the effects of ICT induced changes in behavior of medical population than contributed to the gradual emergence of new type of patient, who is actively searching for relevant medical information and comes to the doctors already with certain vision about her situation. In these and other issues Innovation Translation approach offer clear advantages in studying the adoption of new ICT technology and in offering valuable recommendations to policy makers and other practitioners in healthcare.

I would like to conclude this Editorial Preface with brief introduction of myself as new Editor. My first meeting IJANTTI took place in late 2011 when we submitted a paper with Fabian Muniesa from CSI, Ecole des Mines in Paris. Three years later IJANTTI published another paper of mine, written together with Juan Rogers from Georgia Institute of Technology, USA. My last involvement in IJANTTI was as Guest Editor of a special volume dealing with 3D-printing and new space

entrepreneurship. I assume this collaboration with IJANTTI played some role for the invitation to succeed Arthur Tatnall as Editor of the journal. But I would like to stress that my affair with ANT has a much longer history.

I graduated my PhD in late 1980s in what was then communist Bulgaria. There existed, however, a pockets of relatively free academic research and the Institute of Sociology at Bulgarian Academy of Sciences was one of these places. I specialized in the field of sociology of knowledge and sociology of science and me and my colleagues profited by the openness of the ‘perestroika’ period to establish contacts with Western colleagues. This allowed me immediately after political changes in Eastern Europe to specialize for one academic year at Science and Technology Department, University of Amsterdam, The Netherlands. I still feel deep gratitude to Stuart Blume, Olga Amsterdamska, Chunglin Kwa, Loet Leidesdorf, Rob Hagendeijk and many other Dutch colleagues for their generosity in sharing their knowledge and experience with me. It was during my stay in Amsterdam that I first truly realize the radical breakthrough ANT did in our field, amidst the fierce critique it faced from Sociology of Scientific Knowledge and other competitive STS approaches. I will remember forever one late night in Amsterdam, when after I completed the reading of “Pasteurization of France” of Bruno Latour I went to walk in the street and suddenly realized that the world has changed for me – the nonhuman actants were all over and since then I am not able anymore to consider piece of technology or ‘natural’ entity just as an ‘object’.

The decade that followed brought several research stays at CSI in Paris, then ‘Mecca’ of ANT and personal contacts and collaboration with practically all colleagues there. I was especially happy when during my stay in 1995 I met John Law who was also carrying our research there, preparing some joint publication with Michel Callon. So ANT became the favorite approach I was applying since then – in my ethnographic study of holographic optical laboratory in Sofia, Bulgaria, and in the studies of the development of Advanced Computer Communications and Telematics, innovative entrepreneurship, academic spin-offs, and transformation of power industry in in South-Eastern Europe, carried out during the last two decades. An I confess that I will feel extremely happy if I could contribute to the further advanced of ANT approach as IJANTTI Editor for the coming years.

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Ivan Tchalakov
Editor-in-Chief
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