Journal of Service Theory and Practice

What goes on between customers? A cross-industry study of customer-to-customer interaction

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What goes on between customers? A cross-industry study of customer-to-customer interaction (CCI)

Abstract

Purpose – This study aims to provide service managers and researchers with a deeper understanding of the direct on-site interactions taking place between customers.

Design/methodology/approach – Using the Critical Incident Technique (CIT), 284 incidents are analysed to develop a typology of how service customers experience direct on-site CCI.

Findings – The research reveals a wide range of CCI. A typology consisting of nine distinct categories of CCI emerged: (1) shared use space, (2) assigned space and possessions, (3) information provision, (4) assistance, (5) social conversations, (6) disrespectful attitude, (7) queuing discipline, (8) transaction efficiency, and (9) undesired customers and 'camouflaged customers'. These categories can accommodate a multitude of customer behaviours that impact, negatively or positively, on the service experience of other customers.

Research limitations/implications – Future studies could be conducted following a more inclusive research design capable of gaining CCI insights from employees and managers.

Practical implications – Practitioners can use the typology to systematically identify the full range of specific CCI behaviours affecting their businesses. It also assists them in the analysis and understanding of individual C2C (customer-to-customer) interactions. For academics the typology makes available a comprehensive framework to guide future research into CCI.

Originality/value – The study constitutes the first systematic attempt to classify direct on-site CCI across a wide range of services. The typology, unrestricted by any single-industry bias, is robust and conceptually broad, and therefore highly portable across service industries.

Key words: Customer-to-customer interaction (CCI), Customer service management; Critical Incident Technique; Typology

Paper type: Research paper

Introduction

In many service settings the customer experience is influenced by other customers sharing that setting (Martin and Pranter, 1989). This influence, generally referred to as customer-to-customer interaction (CCI), takes several forms. This paper addresses direct on-site interactions between customers in the service setting. The term *direct on-site CCI* is employed to refer to specific interactions between customers whilst present in the service setting, for example, a customer asking another customer for advice in a shop. Such interactions may be positive (PCCI) or negative (NCCI). Understanding and recognising the types of CCI occurring in a service organisation is an important first step for practitioners wishing to manage these encounters, and thus influence the customer experience (Heinonen *et al.*, 2018).

Academic attention to CCI has been encouraged by the development of several frameworks, such as the servuction system (Eiglier and Langeard, 1977) and the social servicescape (Tombs and McColl-Kennedy, 2003), that incorporate CCI into structural models of service systems. Martin and Pranter (1989) put forward the notion of managing services to achieve customer compatibility and comprehensively explore the field of CCI. Their contribution includes identifying seven characteristics of CCI-relevant services, highlighting the managerial relevance of CCI and suggesting an initial research agenda. Since Martin and Pranter's seminal paper the CCI literature has grown substantially (Colm *et al.*, 2017). Themes addressed in the literature include CCI influence on customer satisfaction; triggers and causes of CCI; personality and CCI sensitivity; and managing CCI (Martin, 2016; Nicholls, 2010; Sreejesh *et al.*, 2018).

A significant CCI research stream has been the construction of typologies of direct on-site CCI (Heinonen *et al.*, 2018). These typologies, typically based on a single service industry, are discussed in the literature review section. The limitations of single-industry CCI studies are acknowledged in the service literature. Martin (1996) emphasises how customer expectations

regarding aspects of CCI, such as social exchange, vary between service industries. Others (e.g. Camelis *et al.*, 2013; Zhang *et al.*, 2010) draw attention to the limited generalisability of single-industry CCI studies and their circumscribed contribution to cross-service industry learning. Indeed, some CCI researchers call for further research directed at identifying new CCI categories (e.g. Camelis *et al.*, 2013; Gursoy *et al.*, 2017; Martin, 1996). Whilst CCI in selected industries has received detailed research attention, the examination of CCI across a range of service industries has received very limited research attention. The identification of this research gap motivated the undertaking of the current study.

The main purpose of the study is to produce a CCI typology based on a wide range of services by analysing and classifying the direct on-site interactions occurring between service customers.   Employing the Critical Incident Technique (CIT) the study analyses 284 CCI incidents. The study focuses on physical service settings as these allow closer comparison with previous studies and are environments where the service firm has more potential to control CCI (via design, employee intervention, etc.). The study also aims to demonstrate how the typology can be useful both to practitioners in assessing their CCI challenges and for guiding future CCI research.

The current research contributes to the service literature. First, the current research contributes to filling a gap in the literature by providing a conceptually broad typology of CCI, specifically designed for cross-industry application. The typology advances our existing understanding of the types of direct on-site interactions occurring between service customers. Second, the current study makes available to service practitioners a CCI audit tool to guide them in identifying and managing CCI. Third, the current research contributes by identifying future research issues linked to the new typology.

The paper is structured as follows. CCI and its scope are briefly overviewed. A range of empirical-derived typologies of CCI are then outlined and compared. Next, the methodology is

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presented. The new CCI typology is outlined, illustrated, and compared to previous typologies. The theoretical and managerial implications are presented, and directions for future research discussed.

Literature review

CCI and its scope

The influence of customers on one another is a wide research area (Colm *et al.*, 2017; Heinonen *et al.*, 2018; Martin, 2016; Nicholls, 2010). Much research attention focuses on the word-of-mouth taking place between customers, but this usually occurs within social circles away from the service setting (Ranaweera and Jayawardhena, 2014). Within the service setting there are several distinct streams of C2C (customer-to-customer) research. One stream concerns family or group consumption behaviour and includes issues such as child, friend and spouse influence (e.g. Ward, 2006). A second stream of research, sometimes referred to as indirect CCI, examines the influence of other customers who merely happen to be part of the scene. Indirect influence (Martin and Pranter, 1989) includes phenomena such as observational learning (e.g. Vaerenbergh *et al.*, 2013); the general level of customer noise (e.g. Nicholls, 2005) and the comfort or discomfort from the mere social presence of others (e.g. Argo *et al.*, 2005). A third stream of research, known as direct on-site CCI, concerns itself with specific interactions in a service setting between customers who have entered that setting separately and are typically strangers. Such research covers a variety of contexts, including short and unplanned CCI encounters (e.g. Grove and Fisk, 1997); extended service encounters (e.g. Harris and Baron, 2004); and group service planned co-creation efforts of customers in service encounters (e.g. Baron *et al.*, 2007).

CCI is an important field to study for several reasons. First, CCI is common (Nicholls, 2010) and, with the growth of self-service technologies (Kim and Yi, 2017), increasingly prevalent. Indeed, for some services C2C interactions outnumber customer-employee

interactions. Second, research suggests CCI is a significant source of dissatisfaction (Grove *et al.*, 1998). In line with the Mehrabian-Russell environmental psychology model, research findings provide evidence that PCCI will tend to attract customers to a service, whilst NCCI will tend to encourage avoidance behaviour (e.g. Tombs and McColl-Kennedy, 2003). Third, research shows that service organisations and their employees often fail to deal effectively with CCI (e.g. Baker and Kim, 2018; Nicholls, 2005). Fourth, even though NCCI is overwhelmingly blamed on other customers, the focal customer holds the service organisation responsible for recovering the situation (Baker and Kim, 2018). Moreover, customers attribute blame to service organisations that fail to notice and/or respond to NCCI (Colm *et al.*, 2017; Nicholls, 2005). For these reasons CCI, including its forms and its management, is an area of service management worth studying.

This paper addresses direct on-site interactions between customers in the service setting and its immediate vicinity. This usage purposely excludes CCI occurring away from the service setting itself, for example, most word-of–mouth communication. A useful conceptual framework for describing and analysing CCI is the notion of 'customer A' and 'customer B' (Eiglier and Langeard, 1977), where the impact of the interaction is perceived from the perspective of customer A and is based upon customer B's perceived behaviour. This behaviour may be verbal and/or non-verbal, and intentional or accidental. Indeed, customer B may not even be aware of her/his behaviour and/or its impact. The impact of the interaction can be understood in terms of customer B adding to, or detracting from, customer A's service experience, i.e. interactions can be classified as positive (PCCI) or negative (NCCI) from customer A's perspective. Varying balances of PCCI and NCCI exist in different services (Nicholls, 2010). Research emphasises the significance of NCCI to customer dissatisfaction (e.g. Sreejesh *et al.*, 2018; Wu, 2007), and NCCI may influence customer dissatisfaction more

than the setting, the frontline employees and overall service performance (Grove *et al.*, 1998).

Hence the importance to practitioners of identifying and managing CCI.

Typologies of CCI

The usefulness of typologies in management and marketing generally is well established. Typologies, through grouping entities according to pertinent underlying dimensions, enable the identification of similarities that can help advance the study of a phenomenon and contribute to its management (Bailey, 1994). Many CCI studies develop typologies of the CCI they detect. Table I details the main typologies relating to direct on-site CCI. Most of the typologies presented in Table I are based on the study of a single service industry, which limits their transferability to other industries.

INSERT TABLE I AROUND HERE

The constraints of single-industry CCI studies are highlighted by their authors. Camelis *et al.* (2013) stress that single-industry typologies are influenced by specific aspects of that industry. For example, train travel usually occurs over a relatively long period and with little contact and presence of the frontline staff. Indeed, even within one industry, customers may have significantly differing attitudes to interacting with other customers. For example, examining retailing, Parker and Ward (2000) find customers less likely to seek help from other customers in supermarkets than in garden centres. Such studies demonstrate that the CCI literature acknowledges that typologies arising from single-industry studies may have limited application to other service industries. Accordingly, they provide support for the validity of the research gap that the present study seeks to address.

The usefulness of a single-industry CCI typology beyond the industry it is derived from may depend upon which industry it is being applied to. For example, a typology based on the hotel industry (Bosio and Lewis, 2008) seems applicable to the passenger transport industry but

not to retailing. Furthermore, as single-industry CCI typologies may be constructed primarily for use in that industry, the wording and the scope of the typology may have limited portability to other service contexts. For example, a study of CCI on package tours (Yin and Poon, 2016) provides a typology with highly industry-specific sub-categories entitled 'littering' and 'torso-nudism'.

Few studies provide typologies based on more than one industry. Camelis *et al.* (2013) use multiple methods to study customer roles in train travel and fitness classes. They identify six main CCI categories: (1) giving information; (2) setting social standards; (3) providing a standard of comparison; (4) entertaining; (5) disturbing; and (6) helping. Whilst based on two service industries rather than one, and employing conceptually broad category labels, their study may still omit relevant CCI types. Indeed, Camelis *et al.* (2013) specifically raise the issue that their findings may not be valid for every type of service.

The only CCI typology based on multiple services (i.e. more than two industries) and covering both NCCI and PCCI is Zhang *et al.* (2010). Their study investigates CCI across a range of service settings and identifies nine types of other customer influence. These categories relate to (1) conversation/getting along; (2) helping; (3) good atmosphere or nice crowd; (4) observing/overhearing; (5) 'fighting'; other negative direct incidents; (6) loudness; (8) rudeness; and (9) other negative indirect incidents. Their typology, whilst interesting, differs to most of the other typologies in that it includes many indirect CCI incidents. Indeed, some 62 percent of incidents are indirect. Indirect CCI tends not to be related to the individual behaviour of other customers, but rather to the general atmosphere such as a loud servicescape. Furthermore, the study, whilst broader than most studies, focuses primarily on the leisure industry which represents two-thirds of all incidents. Moreover, as almost 50% of respondents were aged 18-24y, this may have influenced the overall picture of CCI portrayed as young people can be less sensitive to CCI (Martin, 1996). Another limitation of the study is that it does

not report any saturation procedure for the sample size. This may explain some unexpected gaps in it. For example, Zhang *et al.* (2010) do not mention 'Queuing discipline' as a CCI issue. Given the frequent mention in the CCI literature of the tension associated with other customers 'jumping the queue' (e.g. Dorsey *et al.*, 2016; Grove and Fisk, 1997; Martin, 1996; Yin and Poon, 2016), it is surprising that Zhang et al.'s typology does not capture this form of C2C influence in service settings. Zhang *et al.* (2010) acknowledge the possible limitations of their study and call for future research to further clarify the types of interaction taking place between customers.

This section demonstrates that even though CCI in selected industries has received detailed attention from service researchers, the examination of CCI across a range of service industries has received scant research attention. Given the constraints of single-industry studies, the main purpose of the present study is to produce a CCI typology derived from a wide range of services. An additional purpose is to demonstrate how the typology can be used by practitioners to assess the types of CCI relevant to their own service context. A further purpose of the study is to use the typology as a means for identifying areas for future research.

Research Methodology

Qualitative methods are particularly appropriate to CCI research where there is a need to describe and comprehend complete entities and focus on establishing, from depth of understanding, what is going on. Previous service research suggests that the identification of 'critical' interpersonal exchanges in CCI would enable the description and analysis of the types of exchange that customers find especially difficult (NCCI) or valuable (PCCI), and which therefore influence their experience. Three research methods were considered for use in the study: direct observation, focus groups and the Critical Incident Technique (CIT).

Direct observation is very time-consuming, lacks intimacy, and has potential for contextual errors in registering what is occurring. Focus groups, whilst suited for accessing the types of CCI situations commonly encountered, are less suited to acquiring detailed recall of individual CCI situations. The CIT collects data from the respondent's own perspective and is widely used in service research (Gremler, 2004). The CIT is used in many empirical studies of CCI (e.g. Baker and Kim, 2018; Grove and Fisk, 1997; Hoffman and Lee, 2014; Yin and Poon, 2016; Zhang *et al.*, 2010). It captures the typical way in which customers perceive service encounters. Service encounters occur as sequences, so are best captured as episodes. The order and unfolding of events are relevant to understanding service interaction. Accordingly, the CIT was selected as the research method.

The CIT is essentially a set of procedures designed to collect, content analyse and classify observations of human behaviour, and thus assist in addressing practical problems (Flanagan, 1954). The CIT relies on carefully structured data collection and data classification procedures to produce detailed information. A specific set of data is analysed to generate categories. This is useful in research situations where typologies need developing.

Data collection procedures

Initially, a research instrument for collecting the critical incidents was developed based on approaches used in previous CIT studies (e.g. Keaveney, 1995; Zhang *et al.*, 2010). Next, as in many other CIT studies (e.g. Grove and Fisk, 1997, Keaveney, 1995; Zhang *et al.*, 2010) undergraduate student interviewers were recruited and trained as incident collectors. Each interviewer collected an incident from a convenience sample of three respondents. Respondent age diversity was ensured by the interviewer selecting one respondent from each of the following three age groups: 18-30y; 31-50y and 51-70y. Interviews were conducted in Polish and took place face-to-face in Poland with Polish consumers. Interviews were mainly held

either in respondents' homes or in quiet public places such as cafes between November 2015 and May 2017.

Interviews started with a warm-up question asking respondents to indicate which of a list of 20 services they had used recently. This was done to ensure respondents understood the meaning of 'services' (Keaveney, 1995) and to trigger the memory of respondents about the range of services they use. Then respondents were asked to think of a recent example of when their interaction with another customer(s) was unusually positive or negative, and to describe that incident. Interviews, which were voice recorded and later transcribed, focused on obtaining a clear and detailed account of the incident being reported. This included information about the background context, the cause(s) of the incident and the result. A strong emphasis was placed on obtaining accounts in the interviewee's own words, and interviewers used further questions and prompts until they could clearly visualise the incident (see Appendix 1 for details). The purpose of these accounts was to enhance understanding of how respondents experienced interactions with other customers from their own perspective.

The sample size could not be determined a priori. Instead it was necessary to continue data collection until theoretical saturation (Strauss and Corbin, 2008) was reached. Accordingly, data collection continued alongside data analysis. Flanagan (1954) recommends incidents be collected until "the addition of 100 critical incidents to the sample adds only two or three critical behaviors". In the study Flanagan's recommendation was met after 230 incidents, so theoretical saturation was achieved. In total 297 incidents were collected. Thirteen incidents, however, were rejected on the grounds of being unclear or not being specific incidents, thus leaving 284 incidents (48% male; 52% female) for analysis. The number of incidents collected is comparable to previous use of the CIT in CCI research. For example: Dorsey *et al.* (2016) analyse 329 incidents, and Zhang *et al.* (2010) analyse 142 incidents. The

incidents are from a wide cross-section of service industries including passenger transport, hospitality, retailing, and leisure (see Table II for details).

INSERT TABLE II AROUND HERE

Data analysis

Of the 284 incidents analysed around 64% (182 incidents) are NCCI and around 36% (102 incidents) are PCCI. Analysis involved moving back and forth recursively within the incident data set, continually reviewing the codes and coded data under analysis, and the emerging themes. The six stages of thematic analysis outlined by Braun and Clarke (2006) were followed. The first stage comprised familiarisation with the data by reading (and re-reading) the transcripts and making initial notes, to enable immersion and engagement with data. In the second stage, initial codes were generated which were close to the raw data without over-interpretation. In the third stage, the codes were conceptualised through scrutinising and sorted into overarching themes. The fourth stage of analysis involved reviewing emergent themes to refine them and produce final categories that are distinct but coherent based on evolving meanings and interpretations. Stage five involved naming themes and developing working definitions that captured the essence of each theme. A second judge independently resorted the incidents. The agreement between the original category assignment and the resort judge was over 90%. Inter-judge reliabilities above 80% are considered satisfactory (Keaveney, 1995). Disagreement between judges were usually resolved by discussion which clarified exactly what had happened from the perspective of customer A. Stage six concluded the analysis process by reporting the themes identified, illustrating them with data extracts and discussing the themes in relationship to previous research (see Table III). The next section presents the typology generated and illustrates the categories with verbatim statements.

Findings and discussion

The CIT incidents collected revealed a diverse range of direct on-site CCI situations and enabled the construction of a comprehensive typology of CCI. The typology consists of nine categories: (1) shared use space, (2) assigned space and possessions, (3) information provision, (4) assistance, (5) social conversations, (6) disrespectful attitude, (7) queuing discipline, (8) transaction efficiency, and (9) undesired customers and 'camouflaged customers'. These categories are briefly outlined and illustrated in Table III.

INSERT TABLE III AROUND HERE

The nine categories are based on the underlying logic of what is going on between customers; the categories are independent of one another. Whilst the typology is designed to accommodate all direct on-site CCI, any specific service industry will not necessarily have CCI across all nine categories. The following sub-sections describe each category more fully and discuss it in relationship to the existing services literature.

Shared Use space

This category concerns the priorities inherent in 'shared use space', namely the specific area around the customer, beyond assigned space (see below), that needs to be recognised as under her/his control or influence to gain appropriate benefit from the service. Shared use space is closely linked to the five physical senses and includes the violation of visual and aural use space rights. Visual intrusions by other customers ranged from hindering the line of sight at the cinema to cutting fingernails on a train. Aural intrusions included behaviours such as making inappropriate noises in an academic library or making phone calls during a movie. The following extracts illustrate how shared use space violations can impact the customer experience:

> *At the ATM I was about to enter my PIN when I realised that a young man was standing right behind me. I decided to move closer to the ATM.* (visual: protection of line of sight from unauthorised others; female; 51-70y; bank)

> *At a concert during the finale somebody's mobile phone rang. It happened precisely during a planned moment of silence.* (Aural: the absence of inappropriate noises; female; 51-70y; concert)

Shared use space is highly relevant to understanding CCI and the customer experience. It accommodates an extremely broad variety of situations and expected conditions, such as, being able to move around the service setting unhindered by other customers (e.g. in a supermarket); having appropriate ventilation and temperatures (e.g. on a coach); and the absence of dirt from previous users (e.g. sweat-free equipment in gyms).

The 'shared use space' category is robust enough to logically contain a wide range of miscellaneous behaviours reported in previous CCI typologies. All the items Wu (2007) loosely classes as 'inconsiderate' incidents and most 'grungy' incidents, are grounded on shared use space. Hoffman and Lee (2014) report various disruptive in-class student behaviours anchored in the physical senses. For example: crunching food (sound); body odours (smell); public display of affection (visual). Yin and Poon (2016) report several highly specific other customer behaviour subcategories (e.g. torso-nudism; body odour) which fit neatly under the broader umbrella term 'shared use space'. The customer's desire to influence the space around them **is** widely recognised in the literature. The 'shared use space' category put forward in the current study makes a useful contribution by providing an overarching framework that neatly captures a wide range of fragmented space-related issues within one conceptual category.

Assigned space and possessions

This category accommodates incidents where the CCI is primarily concerned with circumstances or behaviour affecting a customer's assigned space and/or possessions. Possessions are included here because, from a CCI perspective, they are often defined by assigned space (e.g. a spare chair at a customer's table; an item in a shopping trolley). This category includes behaviours such as touching and/or moving of the customer's body, dress or possessions (or potential possessions), and challenging or occupying the customer's assigned space. Typical incidents include:

The train seat I had reserved was occupied. I tried to explain this to the occupant, but they showed no interest and did not react. (Occupying assigned space; female; 18-30y; train)

On a crowded night train two people were lying-down occupying a compartment designed for eight passengers. They had shut the curtains and turned off the light. (Over-occupying assigned space; male; 18-30y; train)

The importance of assigned space and customers attempts to maintain or enhance their allocated space has some recognition in the service literature (e.g. Wu *et al.*, 2014). A study of CCI in cafes (Griffiths and Gilly, 2012) is particularly interesting because it explores how customers attempt to maintain and enlarge their assigned space. For example, by marking space with territorial barriers such as books and clothing, and by misleading other customers about whether a neighbouring space is free. The category offered by the present study provides a useful vessel for a variety of CCI involving allocated space and possessions.

Information provision

This category concerns incidents where customer B is primarily providing service-related information to customer A. Three main sub-categories of information provision are

identified: (a) buying decision information, (b) 'how to use' information, and (c) post-purchase communications. Buying decision information includes price-related communications, and taste and technical advice. For example:

> *I was looking at [brand X] yoghurts in the supermarket when another customer warned me they were near their 'best before' date.* (Information provision: buying decision: product quality advice; female; 51-70y; supermarket)

> *I had a CD in my hand in a supermarket when the customer next to me said he had seen the same CD for 5 zloty less in the music store opposite.* (Information provision: buying decision: price-related information; male; 18-30y; supermarket)

The "How to use" information includes information on how to obtain the service, including how to use self-service systems and technologies, and how regulations work.

> *At a pizza restaurant we were given the wrong pizza. The customer sitting next to us said that if we refused this order, we could keep it and get another one for free.* (Information provision: how regulations work; male; 18-30y; restaurant)

Post-purchase communications include unrequested advice on choice, style or taste.

> *I had just had a new hairstyle done at the hairdresser's and was not too sure it suited me. Another customer told me it really suited me. I left the hairdressers satisfied.* (Information provision: post-purchase style advice; female; 51-70y; hairdresser)

The origin of some 'information provision' category incidents can be found in the customer's desire to reduce risk. Service customers follow various risk-reduction strategies to minimise the potential for purchase risk. One strategy frequently adopted is to talk with other customers to utilise their supposed experience and expertise, and to seek advice and

reassurance. This is particularly relevant in services given the limited opportunity for pre-purchase trial.

The findings of this study regarding information provision are consistent with the findings of several previous studies. McGrath and Otnes (1995) identify ways in which customers use other customers to reduce their purchase risk. Camelis *et al.* (2013), in their typology of fitness classes, identify a role entitled 'co-clients give information about the upcoming service' and a sub-role entitled 'They explain or show you what to do'. Baron *et al.* (1996) emphasise the importance of information exchange between retail customers. Some 38% of the CCI reported in their study, as represented by the product advice, directions and procedures categories, are rooted in information exchange. Likewise, Harris and Baron (2004) highlight the central role of passengers providing travel information to co-passengers on UK trains, and the desire for risk reduction underlying it.

Assistance

This category contains incidents where the CCI primarily involves requests for, or offers of, physical help between customers. Four main sub-categories are identified: (a) resource provision; (b) physical help and/or caring; (c) co-operation or accession to a request; and (d) requests declined. These will now be explained and illustrated.

Resource provision refers to situations where customer B offers customer A some tangible resource. For example:

> *I was at the bank counter and realised I had forgotten my glasses. A customer adjacent to me offered to lend her glasses.* (Assistance: resource provision: lending an item; male; 51-70y; bank)

Physical help and/or caring refers to situations where customer B is a 'good Samaritan' and offers customer A assistance;

> *At a petrol station my petrol cap was jammed, and I could not open it. Another customer saw my problem and opened it for me.* (Assistance: physical help offered; female; 18-30y; garage)

Accession to a request refers to where customer B assists customer A at the latter's request

> *In the library the usb drive on the computer I was using did not work. The person next to me agreed to swap computers.* (Assistance: accession to request; male; 18-31y; library)

Requests declined refers to where customer A's request is declined.

> *A very tall man was sitting in front of me at the theatre and I could not see the stage. I asked him whether he could swap seats with his partner. He refused.* (Assistance: request declined; female; 51-70y; theatre)

Helping other customers is a growing stream in the CCI literature. The assistance category is similar to a category put forward by Camelis *et al.* (2013) entitled 'co-clients do things for you'. It is also similar to the helper roles that McGrath and Otnes (1995) and Parker and Ward (2000) identify. A recent study by Kim and Yi (2017) provides evidence that C2C helping is particularly common in self-service technologies contexts.

Social Conversations

This category describes incidents where the social conversation (i.e. C2C conversation that is social in nature, rather than related to consumption of the service) of other customers is the main CCI impact on customer A. Social conversations might directly involve customer A or merely be overheard by customer A. Such conversations range from extremely negative to extremely positive, from, for example, crude or boring to relaxing and interesting. For example:

> *Last year I flew from Warsaw to New York. There was a very nice lady sitting next to me. We had a great chat and time pass quickly.* (Direct social conversation: interesting; female; 31-50y; plane)

Overheard conversations include conversations that were intended to be overheard, probably to produce a certain effect such as embarrassment to the listener or to convey a certain image to those within earshot.

Some of these insights into social conversation are consistent with the finding of previous studies. Harris and Baron (2004) emphasise the role of conversations between train passengers in terms of the supply of social interaction. They highlight the potential that conversations have for passing away the time on train journeys. Likewise, in hospitality contexts, some hotel guests on vacation spend large amounts of time in social conversation with other guests (Bosio and Lewis, 2008), and elderly consumers value positive social interactions (Altinay *et al.*, 2019).

Regarding overheard conversations, whilst there is some reference to these in the CCI literature, the emphasis is more on overhearing product-related conversations (Davies *et al.*, 1999); overhearing profanity or crude language (Martin, 1995; Yin and Poon, 2016); and overhearing intimate conversations in public space (Griffiths and Gilly, 2012). The current study corroborates these findings, but also extends them by reporting some overheard conversation types not previously discussed in the CCI literature. These types include: (1) overheard conversations causing worry (e.g. a heavily swearing teenager talking to his friend about his forthcoming trial for Grievous Bodily Harm); (2) overheard conversations creating embarrassment (e.g. two youths in a barber's shop making sarcastic remarks about the hairstyles of other customers); (3) overheard conversations effecting concentration (e.g. extended conversations on trains making it difficult to read).

Disrespectful attitude

This category contains CCI incidents rooted in behaviours which are perceived as ethically challenging. They may contain elements of other categories, but they are fundamentally founded on issues such as respect for people and their rights as humans. They

represent infringements of social norms other than time and space norms. Often, they represent a customer observing another customer and, whilst not being directly impacted by how that other customer was behaving, feeling that the behaviour was wrong. Customers witnessing such behaviour may feel uncomfortable with it.

Disrespectful attitudes may involve disrespect towards employees, the service organisation's rules, or other customers. Customers may witness another customer treat an employee with disrespect. For example, customer B speaks to an employee in an unpleasant manner, and customer A considers this disrespectful. Secondly, customers may perceive another customer to be disrespectful towards a service organisation's rules. For example, customer B may be smoking on the train platform or not complying with quiet or silence regulations, and customer A may be more disturbed by customer B's disrespectful attitude than by the direct consequences of customer B's behaviour. Thirdly, a customer may perceive customer B to be disrespectful towards them or another customer. For example, customer A observes customer B deceptively tell customer C that a seat is occupied.

Incidents placed in the disrespectful attitude category include situations of verbal abuse in which customer B directed abusive expressions and words at customer A. The abuse is usually aimed at customer A personally, often based on A having done something. For example:

I was travelling on a crowded bus with large rucsac on my back. A woman suddenly started shouting unpleasant words at me. She wanted me to get off the bus because my rucsac "took up too much room". [verbal abuse; female; 18-30y; bus]

It might, however, sometimes be the case that customer A is caught in crossfire abuse between other customers and employees.

A man queuing just in front of me at a crowded post office suddenly got very frustrated with the clerk's slowness. He turned around to storm out and shouted at me to "get out of the bloody way". [verbal abuse; male; 31-50; post office]

The robustness of the 'disrespectful attitude' category is demonstrated by its ability to cogently accommodate a miscellaneous assortment of highly specific other customer behaviour reported in previous research. For example: reading the newspaper in class, arriving late (Hoffman and Lee, 2014); littering, ignoring 'no photography' signs (Yin and Poon, 2016); rebuking or mistreating employees (Dorsey *et al.*, 2016); customers behaving so much 'at home' that others feel uncomfortable (Wu *et al.*, 2014). What constitutes a 'disrespectful attitude' may vary strongly with both culture and customer age. Accordingly, future research on cross-cultural CCI (Nicholls, 2011) and customer age difference CCI (Nicholls and Gad Mohsen, 2015) could usefully explore this.

Queuing discipline

This category accommodates incidents where customer B's behaviour regarding queuing or waiting for service primarily has an impact on customer A's time. Queuing discipline incidents typically arise from difficulties over the conventions and/or regulations affecting queuing. They include behaviours such as queue jumping, multiple queuing for a single service point, and reserving places in queues. For example:

After waiting one hour at the doctor's surgery, a woman suddenly appeared and sat by

the doctor's door. The nurse appeared and allowed her to enter. (Queuing discipline:

queue jumping; female; 18-30y; clinic)

Queuing discipline incidents are usually based on a violation of the central social norm of queuing, namely, the first-come, first-served principle. This finding is consistent with research on the queue as a social system. Sometimes service organisations themselves operate exceptions to the queue discipline, but this can lead to NCCI if not communicated to, and accepted by, its customers. For example, if customers returning to the service counter are told they need not queue again, this may be misunderstood by waiting customers.

Previous studies also report queuing discipline to be a common feature of CCI. Grove and Fisk (1997), amongst others, find cutting in line to be widespread. Moreover, studies reveal a range of queuing discipline issues and contexts. Dorsey *et al.* (2016) report some grocery store customer feeling it acceptable to cut the queue if they were re-joining it. Yin and Poon (2016) draw attention to the impact of the same individuals repeatedly engaging in queue jumping. These insights highlight the role of informal 'rules' of a queue discipline, held by some customers, as a source of NCCI. Such nuances of queuing contexts are worthy of further research.

Transaction efficiency

This category contains incidents, other than queuing discipline ones, where customer B's behaviour at the point of transaction impacts primarily on customer A's time. It includes causing avoidable delay by, for example, unreasonable monopoly of employee time or the lack of technical skills. For example:

> *The customer at the checkout left her shopping and went back to the shelves. She returned after a few minutes … she had forgotten to buy tea.* (Transaction efficiency: unreasonable monopoly of employee time; male; 31-50y; supermarket)
>
> *The customer in front of me did not know how to use the train ticket machine. I had to wait several minutes.* (Transaction efficiency: lack of technical skills; female; 31-50y; train)

There is a limited discussion in the services literature related to transaction efficiency from a CCI perspective. An important aspect of transaction efficiency is customer speed. Dorsey *et al.* (2016) report that another customer going slower than expected to be a common cause of NCCI. Transaction efficiency can also be viewed in terms of vacating the service setting once consumption is over. Griffiths and Gilly (2012) draw attention to how some café users continue to occupy tables long after consuming their purchases, keeping others standing. In group service

contexts transaction efficiency may include punctuality. Lack of punctuality is noted as a NCCI behaviour in both educational (Hoffman and Lee, 2014) and tourism (Yin and Poon, 2016) contexts. There are many more aspects of CCI-related transaction efficiency, such as speed at the service delivery point or correct use of a particular service option (e.g. fast checkouts), which suggests further research would be fruitful in this area. Such research will be aided by this study's contribution of the unifying term 'transaction efficiency', which enables a fragmented array of studies to be recognised as having a common thread.

Undesirable customers and camouflaged customers

This category accommodates incidents where customer B might reasonably be considered as behaving outside the accepted customer role. The term 'camouflaged customer' is designed to reflect behaviour where customer B may sometimes be a customer or pose initially as a customer, but is usually in the service setting to interrupt, often deliberately, customer A's receipt of services. Three main sub-categories are identified: (a) criminal, (b) intimidation, and (c) other. *Criminal* refers to situations when customer B interacts with customer A in a way which is against the law. *Intimidation/pestering* refers to situations when customer A considers B's interaction a potential threat. *Other* refers to situations which were not criminal or intimidation/pestering but are still considered predominantly undesirable. Typically, such customer behaviour is far removed from the usual customer script. *Other* includes the consumption by customer B of an unintended service, such as sleeping in transport waiting rooms or using dedicated email facilities for playing computer games. For example:

> *I went to the newsagent to buy a car magazine, but I could not get to the shelf because of all the people using the newsagent's like a library.* (Camouflaged customer: free-riding; male; 51-70y; retail)

Several other CCI typologies contain miscellaneous elements which the umbrella term 'undesirable customers and camouflaged customers' coherently encompasses. Camelis *et al.*

(2013), for example, highlight a type of other customer behaviour where the co-clients are frightening and are perceived as a threat or a potential danger. Hoffman and Lee (2014) offer a category entitled 'commitment issues' which seems to cover activities which are outside the student role, such as poor attendance or sleeping in class.

The 'undesirable customers and camouflaged customers' category has some overlap with Harris and Reynolds' (2004) customer misbehaviour label of 'undesirable customers', referring to users of services who are deemed by fellow users (and employees) as unattractive, unwanted, or objectionable. This label covers criminal activity and homeless 'customers' of service establishments. The 'other' category is potentially quite broad and ranges from extreme camouflaged behaviours such as committing suicide (e.g. train services) to simply entering a shop to avoid the rain. Examples fitting the 'other' category can be found scattered around the CCI literature. For example: washing and blow-drying hair in a café restroom (Griffiths and Gilly, 2012); and stealing other customers' drinks (Harris and Reynolds, 2004). The present study contributes by providing an overarching category label that is wide enough to encompass diverse random situations from individual industries but sufficiently directed to be useful.

This section has presented and illustrated the nine categories of the CCI typology produced by this study. These categories have been discussed in terms of the findings of extant CCI typologies and other relevant studies. The next section examines the theoretical and managerial contribution of this typology.

Theoretical and managerial implications

The primary contribution of this study is to provide a deeper understanding of the range of types of direct on-site interactions between customers. This has led to the identification of a range of theoretical contributions and managerial implications.

The present study makes four theoretical contributions. Firstly, the study, by highlighting the existence of widespread and differentiated interaction between customers, has

important implications for how the customer experience is portrayed. It contributes to overcoming the myth that CCI is just a random handful of events that sometimes occur and demonstrates that CCI needs to be placed more centrally within managerial strategic vision. Secondly, thematic analysis enabled the identification of different types of CCI. By identifying nine general types of CCI, and expressing them in overall service industry terms, the typology represents the first broad service typology relating specifically to direct on-site CCI. Furthermore, by employing language which is not particularly associated with any specific service industry and by transcending industry-specific features, the typology represents a contribution towards building an over-arching framework of CCI (Colm *et al.*, 2017). Thirdly, the typology includes aspects of CCI not previously reported in the CCI literature, for example, the 'camouflaged customer' and 'overheard conversations'. As such, the typology contributes new avenues for CCI research. Fourthly, by providing a flexible cross-industry structure the typology will assist future research into CCI to investigate particular types of direct on-site CCI. Whether this research encompasses a single service industry or multiple services, the existence of a common cross-industry typology will provide researchers with a menu of specific types of CCI to put under the microscope. For example, research might investigate the 'transaction efficiency' category in several service contexts, such as supermarkets, railway stations and pharmacies, and reveal nuances of operationalisation of that category.

To better understand the contribution of the proposed CCI taxonomy, and to demonstrate how it improves on others appearing in the literature, a comparative table has been constructed. Table IV explores the connections between the typology and extant CCI typologies by placing the categories provided in previous typologies of other customer behaviour within the nine categories contained in the present study. The table is derived from definitions, descriptions and illustrations contained within the stated articles.

INSERT TABLE IV AROUND HERE

Table IV reveals the following insights: (1) no existing typology covers all the new categories – indeed, many previous typologies focus on just several of the nine categories in the current typology; (2) often when an existing typology has a category which fits into a category in the current study, that previous study category represents only part of the scope of the new category. For example: Dorsey *et al.* (2016) report a 'Going slower than expected' category which fits in the 'transaction efficiency' category but is a very specific behaviour, whereas 'transaction efficiency' is capable of accommodating a far broader range of incidents; (3) some studies contain unexpected gaps (e.g. Zhang *et al.*, (2010) give no mention of 'Queuing discipline' as a CCI issue); (4) some typologies include undefined categories that merely contain stand-alone words or expressions with their meaning only to be ascertained from the one or two examples provided (e.g. Dorsey *et al.*, 2016); (5) most existing CCI typologies either provide broad categorisation of CCI (e.g. Colm *et al.*, 2017; Grove and Fisk, 1997), such as verbal behaviour and non-verbal behaviour, or highly specific categorisation (e.g. Dorsey *et al.*, 2016; Yin and Poon, 2016). Typologies that discuss direct on-site CCI very broadly in terms of respecting or violating social norms, tend to be rather general, and therefore provide limited guidance for practitioners. Highly specific categorisations, on the other hand, can lack portability to other industries.

The typology put forward in the present study has most of its categories built around the resources that are being provided or interfered with in CCI encounters. For example: queuing discipline and transaction efficiency are rooted in the resource of time. The use of this conceptual approach, based on resources such as time, space and information, was intentional in order to create a typology that was more universal and flexible across service industries. Table IV shows that CCI studies in different industries identify different types of CCI. For example: Hoffman and Lee (education), and Yin and Poon (tourism). This serves as evidence that a study that spans multiple services is likely to detect a wider range of CCI.

The CCI typology outlined above has important implications for service managers and strategists at both general and specific levels. At a general level the typology provides practitioners with (a) a framework for analysing and understanding individual C2C interactions, and (b) exemplars of the potential impact of CCI on the quality and competitiveness of service organisations.

The proposed typology enables practitioners to identify specific CCI behaviours and develop strategies to both enhance PCCI and reduce the impact of NCCI on other customers. Moreover, the typology affords designers of service systems and servicescapes a practical checklist for systematically anticipating CCI issues at the design stage. The 'shared use space' category, for instance, highlights the need for service designers to address the complexity with which customers may view the sharing of space, and to anticipate possible C2C behaviours to encourage or discourage. What constitutes 'shared use space' will differ from service to service. In a supermarket, for example, it may be the aisles and shelf space, whereas for train travel it may be the train seat and its vicinity. Taking the example of a library, in designing library tables the designers could discourage the excessive spreading of possessions by designing-in physical or visual boundaries to individual user space. The importance of service design is well-accepted within the service research community, and service-blueprinting is widely advocated. Service managers, however, need to follow a wider-ranging approach to service blueprinting which incorporates the influence of other customers on the service process. Such an approach is visualised in the *Customer-to-Customer interaction enhanced service blueprint* developed by Nicholls (2005).

At the specific level the typology can support practitioners in (a) thinking through the implications and obtain appropriate data for their own specific organisation, (b) identifying the types and forms of CCI which are particularly relevant to them, and (c) considering the impact of CCI on overall performance. The typology has the potential to assist practitioners by being

developed into a customised CCI audit tool for a specific service setting. Table V provides 38

audit questions structured around the nine categories contained in the new typology.

INSERT TABLE V AROUND HERE

Applying this audit tool will assist service practitioners in understanding the types of

CCI that are most relevant to their business. Identifying and managing CCI, especially NCCI,

can assist in raising customer satisfaction and thus contribute to improving customer retention

(Gursoy *et al.*, 2017; Harris and Baron, 2004).

The typology also has potential for structuring the appropriate organisational responses

for preventing CCI-derived customer dissatisfaction arising. For example, regarding queuing

discipline, this may involve training frontline employees (FLEs) to spot and deal with a variety

of queue intrusion scenarios. Specific issues include training FLEs to monitor the queue and

ask who is next when necessary; prevent confusion surrounding queuing discipline arising; deal

assertively with customers attempting to avoid queuing; and emotionally protect customers with

queue entitlements. Regarding 'shared use space' organisational responses might include

establishing and communicating clear rules for sharing space; developing physically and/or

sequentially separated facilities for customers with incompatible 'use space' requirements;

training FLEs to spot 'use space' tensions and to intervene appropriately; and educating

customers to select the appropriate space for their consumption and to respect the 'use space'

needs of others. The specific organisational response will depend on the service setting in

question. For example, how rules for 'shared use space' are communicated will vary by service

setting; communicating and enforcing a quiet zone in a library and on a train are different

challenges.

This section has outlined some of the implications of the CCI typology for the

development of service theory and the management of CCI. As such, the typology can be

considered as actionable for both practitioners and researchers.

Conclusions and directions for further research

The main goal of this research was to explore the direct on-site interactions occurring between customers across a wide range of services. In doing so the paper offers an approach to understanding CCI types that complements single industry studies of CCI. By producing a conceptually broad typology of CCI the study fulfils its main aim. The comparison of the new typology to existing typologies (see Table IV) underlines its comprehensive nature and the merit of a cross-industry approach to the study of CCI. The study also aimed to demonstrate how the typology can be of use to practitioners. One way it has done this is through developing the CCI audit questions structured around the nine CCI categories put forward in the typology. The third aim of the study was to use the proposed typology to identify directions for future CCI research. The discussion below reveals how the typology enables the identification of both empirical and conceptual issues for future research.

Whilst the current study was designed to overcome some of the limitations of previous CCI typology studies, and does achieve broad service industry coverage, it has some limitations. The CIT possesses several limitations, including that respondents may be subject to recall bias; and interviewers and/or researchers may misunderstand respondent stories (Gremler, 2004). As the CIT is an inductive method the possibility always remains of making an observation which does not fit the existing system. The typology is there to be tested and refined in the light of future research.

Another limitation of the study concerns the geographic and service contexts of the incidents collected. Geographically the incidents came from encounters in one European country, which might restrict the generalisability of the study findings. Future research could usefully replicate this study in non-European contexts. Regarding the service context, the incidents collected tended to come from random everyday encounters between strangers, rather than from services designed to shape value (Baron *et al.*, 2007) based on PCCI. Accordingly,

to become more versatile, the typology may benefit from a targeted collection of incidents from CCI-driven services. Likewise, future research should examine service contexts, such as independent online platforms and peer-to-peer services, where the focal firm has a limited role (Heinonen *et al.*, 2018).

This study, by accommodating incidents from a wide range of services, has contributed a CCI typology which is both robust and conceptually broad, thus portable across service industries. Future research could test the robustness of the typology outlined in this article. Given the CIT tends to capture mainly extreme incidents, it is possible that some moderate forms of CCI exist which are not contained within the typology. Future research might seek less extreme incidents, via, for example, a service diary method.

There are many avenues of future research that follow from the findings presented in this article. The present study shows the types of interactions taking place between customers in physical service settings. However, further research is needed to explore these types more deeply. Each of the nine CCI categories in the typology generated by this study has potential for forming the basis of future research. Several research opportunities have already been outlined in the findings section; three more are now highlighted. One area where future research is particularly needed is the 'camouflaged customer' category. Research on human interaction in services typically is based on employees, customers and/or other customer perspectives. The 'camouflaged customer' concept provides a fourth perspective for understanding human interaction in services. Research is required to further elaborate the scope of the 'camouflaged customer' concept. Another fruitful area for research is customer perception of the 'transaction efficiency' of other customers. Such studies could focus on services which are utilitarian rather than hedonic, and on settings where customers are frequently under time pressure (e.g. train stations). Thirdly, from the 'social conversations' category, the forms that overheard

conversations take and their consequences is a topical area of CCI for further research. The author urges further disciplined research into the complex phenomenon of CCI.

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Appendix 1. Notes on the Interview Guide

Interviewers asked respondents:

Please think about a recent time when you had an interaction with another customer(s) while using a service.

That is, you were a customer of a service and during the course of that service, another customer (but not an acquaintance or one of your party) did and/or said something which made you feel positive or negative. What service are you thinking of?

.... service.

Please tell me, in your own words, what happened?

Try to tell me exactly what happened:

Where you were. What happened. What you said/did. How you felt.

Interviewer training included key messages, such as:

- You as interviewer are there to provide clarity and to prompt the respondent to provide a detailed account.

- This method relies on rich detail and the authenticity of personal experience of those who experienced the interaction.

- Ask follow-up questions, as necessary, to probe for detail:

    - What exactly did the other customer do or say?

    - Did a service employee notice the incident and/or take any action?

    - How did this experience make you feel?

    - Was this experience negative or positive?

CCI Typology	Single, dual or multi industry	Focus on NCCI or PCCI	Context of typology	Nature of study	Types of CCI identified
McGrath & Otnes (1995)	Single	NCCI & PCCI	CCI in retail setting (midwestern USA)	In-store observation, interviews and shopping with consumers	Help-seeker; proactive helper; reactive helper; admirer, competitor, complainer, follower, observer, judge, accused, and spoiler.
Baron et al. (1996)	Single	NCCI & PCCI	CCI in a large self-service format retail setting (UK)	Shopper exit interviews at IKEA	Oral-based CCI: Product-related; directions; procedures; physical assistance; and others.
Martin (1996)	Dual	NCCI & PCCI	CCI in restaurants and bowling centres contexts (USA)	Focus groups; Consumer survey	Gregarious, grungy, inconsiderate, crude, violent, malcontent and leisurely behaviours.
Grove & Fisk (1997)	Single	NCCI & PCCI	CCI in theme parks (USA)	CIT (330 incidents)	Protocol incidents and sociability incidents.
Parker & Ward (2000)	Single	PCCI	C2C helping behaviours in garden centres (UK)	Exit interviews; In-depth telephone interviews	Reactive help-seeker; proactive help-seeker; reactive helpers; and proactive helpers.
Harris & Baron (2004)	Single	PCCI (mainly)	Conversations on trains (UK)	Observations & interviews	Identifies 10 passenger activities - some involve CCI.
Bosio & Lewis (2008)	Single	NCCI & PCCI	CCI in 2 hotels (British tourists in Cyprus)	CIT (66 incidents)	Greetings & pleasantries; mutual assistance; sharing information; rudeness; poor manners; bad hygiene; littering.
Zhang et al. (2010)	Multi	NCCI & PCCI	Based on a range of services – mainly leisure industry contexts. (USA)	CIT (142 incidents)	Conversation/getting along; helping; good atmosphere/nice crowd; observing/overhearing; 'fighting'; other negative direct incidents; loudness; rudeness; other negative indirect incidents.
Camelis et al. (2013)	Dual	NCCI & PCCI	Train travel and fitness classes (France)	CIT (117 incidents); Observation ; Focus groups ; Participatory observation	Providing information; setting the standards for social rules; providing a standard for comparison; entertain; disturb; help to participate.
Hoffman & Lee (2014)	Single	NCCI	Disruptive student behaviours (US)	CIT (436 incidents)	Side discussion; technology; over-the-top participation;

					commitment; proximity; miscellaneous.
Dorsey *et al.* (2016)	Multi	NCCI	Examines triggers of rage in restaurants & stores (USA)	CIT (329 incidents)	Negative sociability; verbal; going slower than expected; other protocol; children misbehaving; physical; mistreating employee; racial slur; stealing item/spot; intentional violence.
Yin & Poon (2016)	Single	NCCI & PCCI	Examines C2C on domestic package tour (China)	CIT (253 incidents)	Appearance; behaviours; and language. Includes 17 sub-categories.
Colm *et al.* (2017)	Single	NCCI & PCCI	Examines influence of other customers at a service station. (Italy)	Interviews with managers & customers; observations	Relate to on-site CCI: proactive instrumental interactions, proactive social interactions, reactive interactions & behavioural 'spillovers'.
Gursoy *et al.* (2017)	Single	NCCI	Examines disruptive C2C behaviour in hospitality.	Netnography based on web reviews.	Inattentive parents; oral abusers; outlandish requesters; hysterical shouters; poor hygiene; service rule breakers; ignorant customers.
Baker & Kim (2018)	Multi	NCCI	Other customer failure in restaurants, transportation, hotels … (USA)	CIT (234 incidents)	Rudeness; proximity; loudness; child misbehaviour; waiting for others.

Table I Typologies of CCI (based on empirical studies)

Service industry grouping	Number of incidents
Retail (e.g. grocery/clothes/book stores)	79
Passenger Transport (e.g. bus, train, plane)	68
Restaurants, pubs and cafes	41
Leisure & Tourism (e.g. gym; cinemas; hotels)	30
Healthcare services (e.g. medical/dental clinic)	28
Financial services / office (e.g. bank)	22
Personal services (e.g. hairdresser; repair shop)	16
Total number of incidents	284

Table II Incident breakdown by service industry grouping

CCI Category	Brief Description	Frequency	Illustrations
Shared use space	CCI following from the priorities inherent in 'use space' shared by customer	61 incidents (21.5%)	*A customer is disturbed by another passenger's loud music.*
Assigned space and possessions	CCI occurring primarily in spatial or territorial contexts affecting a customer's assigned space and/or possession of objects	24 incidents (8.5%)	*Two customers dispute who is entitled to buy the last TV in the sale.*
Information Provision	CCI arising from the provision of service-related information by other customers	52 incidents (18.3%)	*A customer, noticing a fun-looking toy in another customer's trolley, asks where to find it.*
Assistance	CCI involving requests for or offers of help (other than service-related information provision) by other customers	31 incidents (10.9%)	*Another customer helps to reach a tin on a high shelf in the grocery store.*
Social conversations	CCI based on social conversations directly involving or overheard by a customer	22 incidents (7.7%)	*The train journey passes quickly due to chatting with a fellow passenger.*

Disrespectful attitude	CCI related to other customer behaviours that are perceived as ethically challenging (and not belonging to other CCI categories)	*39 incidents (13.7%)*	*Another customer swears at the train conductor.*
Queuing discipline	CCI arising from difficulties with conventions/regulations affecting queuing	27 incidents (9.5%)	*A bank customer joins the front of a long queue, claiming they had been there before.*
Transaction efficiency	CCI related to the time-consequences of behaviour at the point of service delivery	15 incidents (5.3%)	*A customer is very slow to pack their trolley at the supermarket checkout.*
Undesired / camouflaged customers	CCI following from the actions of persons who are considered not to be behaving within the bounds of the intended customer role	*13 incidents (4.6%)*	*A customer has wallet stolen by a professional pickpocket on the airport bus.*

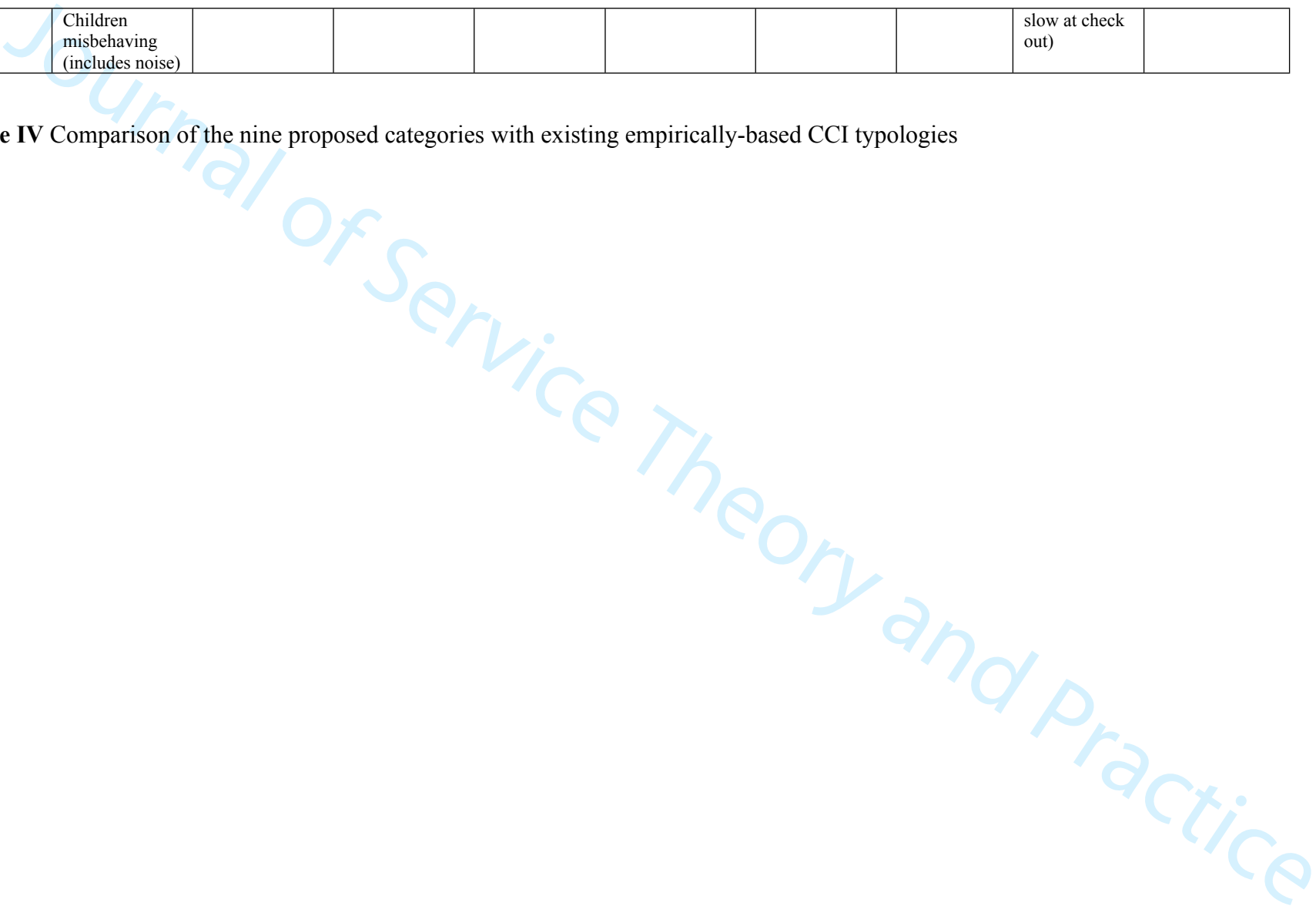**Table III**   A Typology of Customer-to-Customer Interaction

	Shared use space	Assigned space & possessions	Information provision	Assistance	Social conversations	Disrespectful attitude	Queuing discipline	Transaction efficiency	Undesired customers & camouflaged customers
McGrath & Otnes (1995)	-	Competitor	Help seeker; Proactive helper; Reactive helper; Observer	-	Admirer; Spoiler	Judge; Accused; Spoiler	-	-	-
Martin (1996) Based on his Table 1 & 2	Grungy Inconsiderate Crude	-	-	Leisurely	Gregarious	Inconsiderate Crude Violent Malcontent	Inconsiderate	Leisurely	-
Baron et al. (1996)	Others (Niggles)	Others (Niggles)	Product-related; Directions; Procedures	Physical assistance;	Others (Pleasantries; mutual moans)	-	-	-	-
Grove & Fisk (1997)	Other incidents in line;	Verbal incidents in line;	-	Other incidents in line; Other protocol incidents; 'good deeds'	Verbal incidents in line; Friendly incidents;	Verbal incidents in line;	Physical incidents in line	-	-
Parker & Ward (2000)	-	-	Helpseeker & helpers	-	-	-	-	-	-
Harris & Baron (2004)	Settling & unsettling; Personal grooming	-	-	Sleeping; settling	Eating; Talking;	-	-	-	-
Bosio & Lewis (2008)	Bad hygiene; Littering	-	Sharing information	Mutual assistance	Greetings & pleasantries; Extended conversations	Rudeness; Poor manners	-	-	-
Zhang et al. (2010)	Fighting (for space); Loudness	-	Helping; observing/over hearing;	Helping	Conversation & getting along (just as PCCI)	Rudeness	-	-	-

Camelis et al. (2013)	-	Disturb ('they enter your private space)	Giving information; Helping; Standard of comparison	Helping	Entertaining	-	-	-	Disturb
Hoffman & Lee (2014)	Side discussion issues (sound) Technology issues (mainly sound) Proximity issues	-	-	-	-	Miscellaneous issues	-	Over-the-Top participation	Commitment issues
Dorsey et al. (2016)	Verbal (loud) Other protocol (blocking); Children misbehaving; Physical (shoving, bumping);	Stealing item/spot from customer;	-	-	-	Negative sociability; rude/poor etiquette; Other protocol (spitting); Mistreating employee; Racial slur;	Physical (cutting);	'Going slower than expected'	Intentional violence toward respondent;
Yin & Poon (2016)	Torso-nudism; Body odour; Making noise; Littering;	-	-	Mutual assistance	Elegant manner; Friendly language; Crude language; Interfering language	Selfishness; Conflicts with tour guide; Violations	Scrambling (pushing for position)	Unpunctual	-
Colm et al. (2017)	Behavioural 'spillovers' (e.g. loud sports fans);	-	Proactive instrumental interactions (e.g. product information)	-	Proactive social interactions; Reactive interactions	-	-	-	-
Gursoy et al. (2017)	Inattentive parents; Hysterical shouters; Poor hygiene; Service rule breakers	-	-	-	-	Oral abusers; Hysterical shouters; Service rule breakers	-	Outlandish requesters; Ignorant customers	-
Baker & Kim (2018)	Loudness; Proximity;	-	-	-	-	Aggressive complaining	-	Waiting for others (e.g.	-

	Children misbehaving (includes noise)						slow at check out)	

Table IV Comparison of the nine proposed categories with existing empirically-based CCI typologies

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Category	Illustrations of CCI audit questions
Shared use space	• Do customers share space? • How heterogenous are customer activities in this shared space? • Do customers complain about the behaviour of others in shared space? • How do your systems, rules & employees manage the sharing of space? • Do you have dedicated zones for specific customer activities? (e.g. quiet carriage) • How is the sharing of this space influenced by physical senses such as sound, sight and smell?
Assigned space and possessions	• Does your service assign specific space to customers? (e.g. a seat). • Is this space sometimes accidentally assigned to more than one customer group at the same time? • If so, do you have procedures for (1) knowing about this, and (2) dealing with this? • Do customers sometimes occupy the incorrect assigned space? (e.g. wrong seat in the cinema; seating for disabled) • How are such situations dealt with by customers and employees? • Do some customers occupy more space than is reasonable? • If so, how do your systems and employees prevent/manage this?
Information Provision	• Do customers provide information to one another about (1) products and/or services being sold, or (2) how to use the service? • Why are customers requesting/providing this information? • Would it be more desirable for the firm to provide such information? • What does the firm do to explain to customers how to use the service? • Are there any particular segments or types of customer who find using the service difficult?
Assistance	• What physical assistance may some customers request or receive from other customers in your business? • Are there any risks associated with receiving or providing such assistance? E.g. might a request be embarrassing? • Is it realistic or desirable that employees provide this assistance?
Social conversations	• Do customers engage in social conversations with one another? • Do customers hear the social conversations taking place between other customers? • Do employees intervene when inappropriate conversations/language are occurring in the service setting? (e.g. use of bad language)
Disrespectful attitude	• Do some customers show disrespect towards your employees in front of other customers? • Do some customers show open disregard for customer behaviour regulations? • Do some customers negatively engage with other customers in an attempt to enforce (or communicate) their own version of 'the rules'?
Queuing discipline	• At what point(s) in the system do customers queue/wait? • How clear is this system? • Are there some customers who may consider themselves special cases? Why?

	• What does the organisation do to manage situations where customers are entitled to avoid queuing? • Do employees monitor and enforce the queue discipline? • What training and guidance do employees receive to assist them monitor and enforce the queue discipline?
Transaction efficiency	• Do some customers take longer to serve than others? • What are the reasons for this? Are they connected to the behaviour of these customers? For example: ○ customers being indecisive about their requirements • In such situations how do employees manage these customers?
Undesirable customers / camouflaged customers	• Is your service setting easy to access and to engage in activities which are outside the scope of reasonable customer behaviour? • What is the frequency and intensity of such behaviour? How likely is it that customers would bring such activity to your attention?

Table V Illustration of CCI audit questions based on the nine categories of CCI