Critical incident techniques
Towards a framework for analysing the criticality of critical incidents

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Abstract *The traditional critical incident technique (CIT) and variants of the same have frequently been applied in service research for several decades. The technique has often been used to capture data on and analyse both negative and positive critical incidents. While one technique displays hosts of critical incidents in benchmark-type series (SIT), another variant describes the dynamism in one discrete critical incident and a third the dynamism of the configuration of critical incidents (SPAT). In this article the different variants are discussed in relation to psychological theory focusing on the concepts of time, history and memory. To be able to analyse the criticality from the individual customer's perspective, we argue that one must understand the significance of critical incidents in the light of human memory mechanisms and judgement processes. The discussion forms the basis for suggesting a new, tentative framework for analysing the criticality of critical incidents. We call this criticality critical incident technique (CCIT).*

Introduction and aim

In the service research literature the emphasis of critical incidents is considered a tool for managing services. At the time when Flanagan (1954) described critical incidents, their importance for research on services was not predictable (Grönroos, 1982; 1983; 1987; 1996; Parasuraman *et al.*, 1985; 1988; Gummesson, 1987; Edvardsson, 1988; Liljander and Strandvik, 1995).

Later, when critical incident technique (CIT) was applied to service research and interaction situations, it became a tool for reflecting customer-perceived quality and customer dis/satisfaction based on positive and negative critical incidents (Bitner *et al.*, 1985; 1989; Bitner, 1990; Edvardsson, 1988; 1992; Stauss, 1993). A new stream of studies emerged using CIT with, focus on consequences for the relationship between customers and service providers. Strandvik and Liljander (1994) focused on the strength of customer relationships and studied both positive and negative critical incidents. Keaveney (1995) studied customer switching behaviour by using CIT with a focus on negative critical incidents. Studies using CIT followed the same trends as did other research on services by highlighting customer relationships. Such a directed new focus included a variant of CIT called sequential incident technique (SIT) (Stauss and Weinlich 1995; 1997). SIT benchmarked the service by positioning the episodes of a

relationship into order of priority, as perceived by customers and based on their positive, neutral or negative weight (Stauss and Weinlich, 1995; 1997). Olsen (1992; 1996) gave an additional presentation of studies with a focus on positive and negative incidents; however, he added a process description of an episode with consequence for the relationship, possible to track act by act.

Keaveney (1995) applied CIT to a study where the consequence for the relationship was clear; the customer had switched to another service provider. Stewart (1996) did the same and she focused on the outcome, aware of a switching process but its depiction was still not there. Roos (1996; 1998; 1999a) also took the departure in switching and described the switching path leading from a deliberate switching decision to a change in behaviour. The path was depicted and described using a CIT variant labelled switching path analysis technique (SPAT). SPAT made the process character understandable. In other words, the dynamism of the switching determinants was connected to underlying factors (triggers). A trigger makes customers sensitive to switching determinants. The description of the dynamism, the connections between separate trigger factors and configuration of factors of a switching path is the emphasis of SPAT. In other words, it may be argued that SPAT represents a new stream of CIT variants.

The novelty of SPAT can be argued to be in its consequence consideration of critical incidents connected to the time span of the CI occurrence. Time has not been considered in the use of CIT in connection with memory. For the validity of an interviewee reply, questions must be assessed according to what and how critical incidents are possibly remembered. First, there are differences in how a customer remembers CI. The difference is based, on the one hand, on the positive and negative. On the other hand, an interviewee may evoke attribute-based concerns different from judgement-based concerns. Therefore, attribute-based questions cannot be analysed into judgement-based results, i.e. decisions. These concerns have not been discussed in connection with the use of CIT.

All variants of CIT, discussed above, are based on the customer's ability to remember and make judgements based on remembered, perceived incidents. The overall aim of this article is to contribute to a better understanding of the criticality of critical incidents. Our more specific aims are:

(1)

to review the different critical incident techniques, focusing on how criticality is captured;

(2)

to relate the literature on CIT – its development and use in service research – to the literature in psychology on human memory and judgement processing; and

(3)

to suggest a new, tentative frame of reference to capture and understand the criticality of critical incidents.

We label this technique criticality critical incident technique (CCIT).

Storing, evoking and portraying critical incidents

Critical incidents have been used extensively in service quality and management literature. They are defined as interaction incidents, which the customer perceives or remembers as unusually positive or negative when asked about them. Customers recall them and tell them as stories (Flanagan, 1954; Bitner, 1990; Edvardsson, 1988, 1992; Stauss, 1993; Roos, 1999b). Typically, researchers have focused on finding the most frequent service-quality dimensions or determinants by using traditional content analysis.

The traditional critical incident technique has its origins in the technique used by Flanagan (1954). However, the definition of a critical incident has somewhat changed over the years. Flanagan first described his technique as a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems, and thereby to develop broad psychological principles.

> By an incident is meant any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical, an incident must occur in a situation where the purpose or intent of the act seems fairly *clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effect* (Flanagan, 1954, p. 327).

Stauss and Hentschel (1992) compare a quantitative attribute-based measurement approach to studying service quality with findings from a parallel critical incidents study, and conclude that these methods give different results. The attribute-oriented approach captures routine aspects of service quality, while the critical incident technique gives a view of non-routine quality.

Techniques to collect data on critical incidents

Edvardsson (1992) points out that data collection regarding critical incidents can be done in many ways: by personal interviews, focus group interviews, and direct or participatory observation. He suggests a simple basic model as an interview guide, i.e. cause, course and result (p. 19). In a study concerning critical incidents in an airline, where 320 critical incidents were selected among business travellers and 80 from front-line employees, the customer relationship remained unchanged in 80 per cent of the cases; in only 8 per cent of the cases was the relationship terminated. Critical-incident studies can be conducted in different ways. Bitner (1990) used hypothetical situations, which are thought to represent negative disconfirmation, in order to test the reactions of respondents. Olsen's (1992) method was to ask for any unusual or unsatisfactory incident in banks. Olsen also recorded opinions of how the incident affected the respondents' relationship with the bank. He categorised the content into service quality dimensions and found different types of paths. He structured the incident in terms of the triggering factor, further critical steps

and final outcome. All of these phases may be outside the customer's tolerance zone, but the incident is evoked by the triggering factor exceeding the tolerance-zone limits. However, he did not classify the incidents on the basis of the triggering factor, but on what he interpreted to be the core problem.

Johnston (1995) used a traditional questionnaire to collect data on critical incidents (CI). The advantage with this method is that you get texts where the respondents express themselves in their own words. The disadvantage is that respondents may not be accustomed to or willing to take the time to write a complete or understandable (for the researcher) story describing the CI. When personal interviews are used, the researcher has the advantage of being able to add follow-up questions and by probing arrive at a better description and understanding of the CIs.

Techniques for analysing critical incidents
The development of the switching path analysis technique (SPAT) was based on the fact that an incident is critical when the observed consequences of it are clear (Roos, 1998; 1999a; 1999b). As far as actual switching behaviour is concerned, there is no doubt about the consequences of the incidents which customers judge to be decisive. Regardless of whether the switching was a consequence of one critical incident or of several incidents in a range, or whether there was a combination of factors, there would not probably have been any switching if the incidents had not been perceived as important enough by the customers. In addition, SPAT also makes the dynamism on the path understandable, formed by a configuration of switching determinants, in terms of how factors influence each other Miller and Mintzberg (1983) argue, likewise, that it is illogical to do the analysis first and then the synthesis. The analysis will be weak by focusing too much on the significance of correlation instead of on the significance on drawn conclusions. They mean that research on continuous relationships tends to focus on few variables in its search for a simple causation. The focus should rather be on commonly occurring clusters of attributes, which may be called gestalts, archetypes or configurations.

Flanagan (1954) referred to the frequency of incidents as opposed to the number reported by the observer. He pointed out the importance of *time* and *memory* in connection to CIT. He argued that if people are interviewed, the number of incidents reported daily might be up to five times the number reported in weekly interviews. He suggested that when the interviewing is not done daily, memory may benefit from a facilitating configuration, an assumption based on his idea that daily interviewing could remind the interviewee to concentrate too much on the next interview. In other words, the respondent could plan his/her response beforehand. This may result in an unnaturally high number of incidents. There is a trade-off between remembering real incidents which are kept in mind because of their exclusiveness, and remembering many incidents of which possibly not all are really important to the respondent and consequently for the study. Flanagan (1954) maintains that it is not the assembly of data that is most problematic but

the interpretation of it and the development of a system for classification. Theoretical sensitivity (Glaser, 1978) is particularly important when interpretation is made and classification schemes are developed. Another approach to how CI are remembered may go through the concept of frequency (Friman, 2000).

Introducing time and history when analysing critical incidents
The role of *time* and *history* in understanding the emergence, development, decay and regeneration of what has happened is critical. The current approach within service management is to focus on short-term interactions, e.g. service encounters. In such a perspective there is an implicit assumption that a specific service encounter carries the explanation for why customers switch service providers. The critical incident technique (CIT) has been the most commonly used method employed to study such moments of truth. In a relationship perspective, it is quite clear that there is, at least potentially, a much longer process behind a customer's reaction by perceiving something to be critical which also may result in a decision to exit a relationship with a service provider.

In the following sections time, memory and history of a customer/service provider relationship are discussed. According to Taylor (1991), there are different aspects concerning time, memory and judgement processes that influence customers' perceptions of criticality.

In Figure 1 the substance of the following discussion is depicted. To begin with, the circles represent critical incidents. The perception of critical incidents
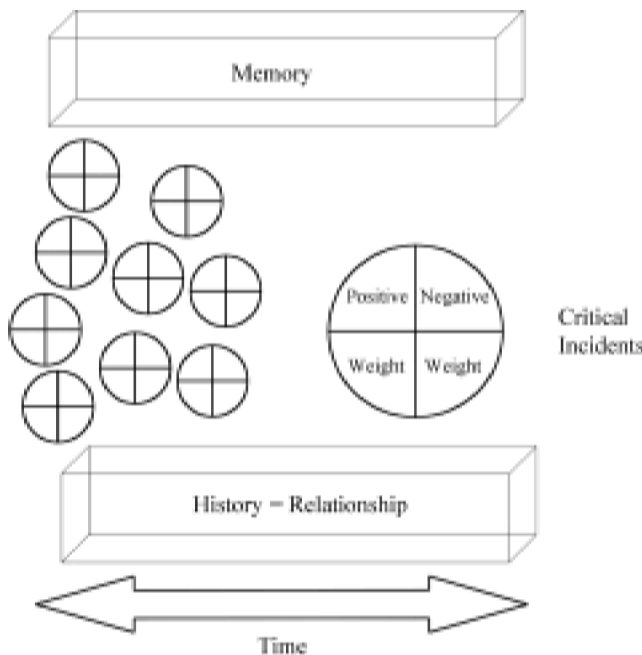

Figure 1.
Factors of customer judgement processes in critical incidents

is a function of factors related to both the respondent's memory and the time dimension, that is the history of the relationship. Time and memory are connected to the concept of history, in marketing referred to as the relationship between service provders and their customers. The reason for a double directed time arrow is the difference and consequence of remembering CI for the results. Dividing the circle into four areas, positive, negative and weight of them, serves the same purpose. Characteristics of critical incidents influence how they are stored in memory and, thus how they are remembered. Consequently, the approach to reflect such incidents influences the results. The discussion continues by emphasising each of those concepts. The concept of time starts the discussion. In the framework of CIT, time has the role of detaching a customer from the critical incident. How such mechanisms correspond with the way CIT and its variants use time is focused on.

Time

In the context of critical incident techniques where customers' remembering of either positive or negative incidents is in focus, *time* has certain significance. Also availability in connection with time and positive or negative incidents in connection with time are discussed (see Figure 2).

Those connections are visibly separated from Figure 1 and discussed accordingly. The concepts of time, availability and response, concerning both positive and negative CI, are included in the discussion on mobilisation and minimisation. Psychological literature suggests that negative incidents may have a greater impact on customers than positive. A discussion is also included about the mechanisms behind how a customer weighs a critical incident in terms of how negative an incident is compared to how another is positive. First, a definition of the term "negative incident" as given by Taylor (1991), it refers to a critical incident definition by Lazarus and Folkman (1984) as follows:

> A negative incident is one that has the potential or actual ability to create adverse outcomes for the individual. Thus, the definition includes incidents that have not occurred but are
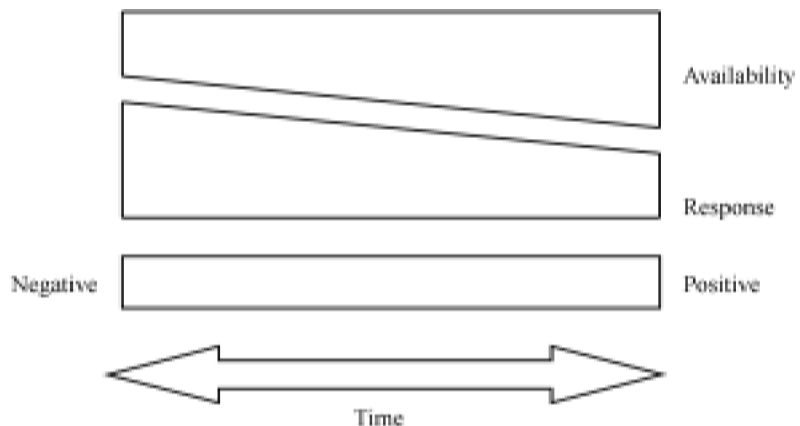

Figure 2.
The mobilisation and minimisation pattern

perceived as potentially threatening, as well as those that have occurred and are perceived as harmful (Taylor, 1991, p. 67).

Congruity and ability to be assimilated
The positive evaluation of the familiar incident is based on congruity and ability to be assimilated, while incongruity and accommodative pressures lead to arousal and to evaluative states that may be either positive or negative. Both these should be considered to represent extremes of a continuum from complete congruity and easy assimilation to extreme incongruity (Mandler, 1982; Marcel, 1982; Zajonc, 1980; Cohen and Areni, 1991). In the case of the occurrence of schematic congruity, no important structural changes will take place. In the absence of a fit between evidence and expectation (schematic incongruity), assimilative and accommodative processes will be present. If these notions are included in the dynamic model of affective response, the different levels of congruity (complete congruity to extreme incongruity) are illustrated by moving the focus from automatic response to sensory information to the higher-level appraisal and deliberation.

Response
Cohen and Areni (1991) stress the necessity of cognitive appraisal in the generation of affect. These appraisals may be automatic and immediate in some situations, and deliberate and elaborative in others. It is also considered that, in many stimulus situations, the sequence of thought, feeling and behaviour give rise to subsequent levels of activity. Three levels of cognitive appraisal are described: automatic, schema, and a third which needs higher appraisal and deliberation. Affect may also result in a tag or "marker" used for both label and recording the aforementioned state. Some "affective states" are strong enough to leave an affective trace. It is worth noting that while the affect itself may be transitory, it may be possible to retrieve the memory trace of that experience over a considerable period of time. By restricting the term "affective trace" to cognitive elements, which serve as tags for experienced states of affect, their instantiation implies more than merely the retrieval of information. When the memory of such an episode is brought to mind it may well have the capacity of eliciting the same feeling or emotion, though not always to the same degree.

The mobilisation and minimisation pattern
Negative incidents seem to appear and mobilise physiological (behavioural), affective and cognitive reactions to a greater degree than do positive incidents. In this sense, there could be asymmetry in the impact of negative incidents. Without a deeper understanding of the mobilisation and minimisation pattern, wrong conclusions may be drawn in the analysis of critical incidents. There is, namely, another interesting asymmetry in customers' response to negative versus positive incidents. Following the occurrence of a negative incident and the customer response to it, opposing responses seem to cool down, mute and

even erase its existence. Faced with the choice of techniques to portray customer preferences, it seems beneficial for the user to understand both how time influences critical incidents, but also how CIs are remembered. Therefore, memory aspects on critical incidents are discussed next in order to add to our understanding of the mechanisms behind recalling critical incidents.

Availability
The nature of positive and negative related to time included in remembering incidents and using them for decisions is essential regarding the concept of availability. Availability indicates the ease or difficulty of retrieving incidents from memory connected to decision and behaviour situations (Hastie and Park, 1986, p. 261). In other words, positive and negative incidents differ in their way of producing input for behaviour from memory. The difference is here labelled availability.

In sum, the mechanism over time which represents the difference between how negative and positive incidents are responded to when they occur, the consequence of the response is stored for use at some other point in time, which is depicted in Figure 1. The mechanism is referred to as the mobilisation and minimisation pattern. In other words, there is a balance between how critical incidents are stored and how they are retrieved from memory. Therefore, partly the same concepts are also discussed in the next section, where memory is central.

Memory
Availability of information, here critical incidents, is now discussed in relation to how critical incidents are stored in customers' minds. It is likely that the more of an incident a customer can remember and the easier a CI comes to mind, the higher impact it will have on customer behaviour. Accordingly, there are two main and distinct aspects concerning memory that need to be explained. First, all customers have a judgement operator concerning perceived incidents, which has been learnt over a customer's life and is stored in long-term memory. Second, the judgement operator is limited because it uses the working memory. These memory-based aspects influence the discussion on whether memory has causal priority and causes judgement or the reverse (judgement causes memory). When CIT is used in a study, the referred effect of a critical incident may be seen in the light of whether the approach benefits from a customer awareness of a clear result or not (criticality, Edvardsson and Strandvik (1998)). Another possibility concerning the approach of CIT study is the unclear result situation. Such a situation is represented by a seemingly continued and unaffected relationship, despite the occurrence of critical incidents.

Availability
According to Taylor (1991) there is a clear difference between long-term memory consulting and online information. Information serves in both cases as

input to the hypothetical judgement operator. The way the information is processed is decisive for the perception a customer expresses when asked in a study. Hastie and Park (1986) and Robertson and Kassarjian (1991) describe the differences between on-line versus memory-based input to processing as decisive in judgment situations. In other words, if a consumer has to make a decision or an evaluation on-line, when no similar, earlier judgement situations are available in memory, the outcome is difficult to predict. On the other hand, when a similar judgement has been made before and stored in mind, the likelihood of using it as an input in a new judgement situation is high. It seems like initial summary judgements, once made, can take on lives of their own and affect related judgements and behaviour. Also another important feature concerning incidents exists. Unsolved negative critical incidents seem to be focally concerning their availability in memory. Moreover, most negative critical incidents seem additionally to be unexpected, and the unexpectedness provides an additional accent in memory (Fiske and Kinder, 1981). The intensity of negative critical incidents is higher than the intensity of positive incidents (in Figure 2, response). On the other hand, relative to positive events, negative events appear to be less accessible in memory. It is pointed out that people remember and can recall positive material better and quicker. Therefore, the memory needs support in order to remember negative incidents (Isen and Hastorf, 1982; Taylor, 1991), for instance by factors related to the initial incident. The incident may need to be "rehearsed", that is, replayed. Accordingly, when the approach to negative critical incidents includes a relatively long time span, the risk to oversee their negative effects seems to be minimal. Nevertheless, the relationship between negative critical incidents and their consequences is not thereby described and solved. Is there a difference between an occasional critical incident and repeated incidents concerning their influence on behaviour? Moreover, is it possible to separate critical incidents into "attribute incidents" and "consequence incidents" by asking the right questions and by doing a comprehensive analysis?

History
According to Hastie and Park (1986) and Taylor (1991), failure experiences are the most powerful negative incidents people experience among services. Therefore, individuals try actively to keep implications from these potential threats to self-esteem as narrow and as neutral as possible. Such a minimisation mechanism has implications for the long-term approach to studies. When a service failure occurs for customers, they strive to trace information from long-term memory in order to ascertain their opinion concerning the failure.

Such a mechanism is of influential importance for the approach of a study. When, for example, the relationship between service providers and their customers is described and consequences drawn accordingly, the history of the relationship, including critical incidents, becomes important. The history of the relationships exists regardless of how the approach to the study is viewed.

However, when consequences for future behaviour are considered, the history and how it is retrieved to memory and weighted is vital. Seemingly small incidents may grow in the customer's perception because of history. Generally, however, such incidents may not have the potential to cause the kind of consequence they have by the "history customer". Therefore, the history and future behaviour regarding customer relationships need to be understood to better understand how reliable behavioural consequences of critical incidents are. In other words, behavioural consequences of critical incidents may be more tied to the history of a customer relationship than to the critical incident itself.

Memory and judgements
An assumption in the literature is that judgement and memory processes take place at about the same time. Another is the question of whether memory causes judgement or judgement causes memory. Judgement, once completed, has the potential to bias retrieval. In such situations, a dialectic process between the judgement, the memory and the responses takes place (Hastie and Park, 1986; Kahneman and Tversky, 1973). In other words, if a customer once made a decision based on a critical incident, the processing of the same kind of critical incident differs from processing when no consequences of the critical incident was considered. This kind of processing is independent from a decision-based behavioural change. If some time has passed since a similar critical incident occurred, which now occurs again, the customer searches for support from long-term memory. Based on the consequence of the critical incident, actual or intended, the processing differs. These opinions have implications for critical incident techniques of all kinds. Accordingly, special attention should be paid to the planning of the interview guide. It seems that customers' focus on *attributes* and *consequences* of critical incidents is possible to distinguish during an interview. That gives new potential for forecasting the strength of the relationships between customers and service providers.

To sum up, the choice between techniques for portraying customer preferences regarding both intended and actual behaviour seem to revert to questions of memory and prediction. The polarisation of positive and negative in connection with critical incidents is also psychologically challenging. It is likely that negative incidents initially can account for disproportionate attention and resources because they often are unexpected and surprising. The minimisation pattern mitigates, however, the effect of the "unexpected" and "surprising", which otherwise would mislead the behavioural consequence caused by judgment based on memory. The effect of negative incidents has not been discussed often and in depth. Negativity and unexpectedness are typically correlated and therefore evoke similar patterns of cognitive and emotional physiological as well as behavioural response. Their effect, however, may be explained to some extent by negativity and unexpectedness. Accordingly, minimisation of negative incidents has implications for positive incidents. Customers avoid negative incidents more than they approach positive ones. There is, in other words, a spillover effect on the positive. The result is a

positive judgement. Meyer (1987) refers to the same mechanism when he discusses prediction of the outcome of an evaluation situation, the fact that customers avoid negative decisions. On the other hand, there is an observed tendency to overweight negative information, which negative decisions are based on. That might offer natural protection against over-positive judgement.

Time, memory and behavioural consequences

In Figure 3, differences between CI techniques and their capability to portray customer perceptions is depicted. The figure can briefly be argued to cover the capability of customers' mind regarding memory, including proportionately separating positive and negative critical incidents. The other part of the figure depicts how different CI techniques portray customer perceptions based on psychological realities. The "critical" concept is the physiological prediction, in services research, the behavioural consequence of the critical incident. Figure 3 displays a range of techniques based on customer reflections of critical incidents. The figure covers techniques from attribute based, with no behavioural consequence (CIT), to actual behaviour (SPAT).

Criticality critical incident technique (CCIT)

According to Figure 3, different kinds of CIT variants are depicted as a consequence of the literature review of this article. There are two groups of techniques. The first group includes traditional CIT and SIT. These techniques are similar in their way of interviewing, analysing and reporting. They also include both positive and negative incidents. The second group includes CCIT and SPAT, both of which focus on behaviour. CCIT operates in ongoing relationships (intended behaviour), while SPAT was applied to switched-from relationships (actual behaviour). The crucial point is the handling of customers' ability to remember. There seems to be an obvious difference between the reliability and validity of results using critical incident techniques depending on how questions are asked.
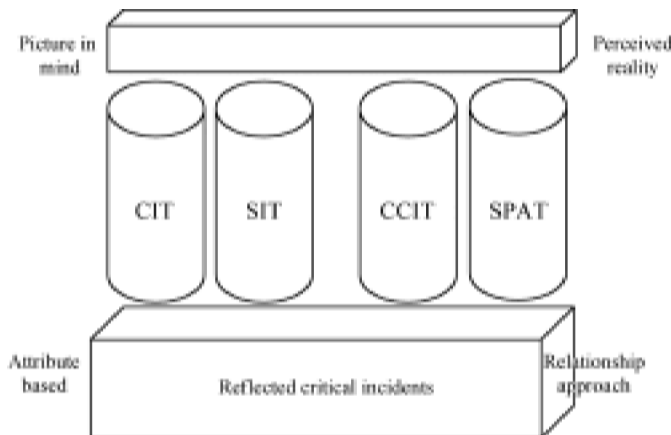

Figure 3.
A psychologically based classification of different CI techniques with relationship concerns

Behavioural matters in connection with critical incidents are based on an underlying psychological assumption. Positive and negative information and incidents are unequal in certain respects. While negative incidents embed behavioural, affective and cognitive potential, positive incidents are more salient (Isen and Hastorf, 1982; Taylor, 1991). In other words, *critical incidents cannot be considered as endpoints of a continuum*, but rather as distinct phenomena. Therefore, their behavioural effects depend on the potentials and restrictions that customers' memory offers. In essence, one part in the choice situation between critical incident techniques is the portraying of the critical incidents, and the other part is the behavioural aspect. Accordingly, to mitigate the first difficulty, knowledge about how to ask and analyse referents and their stories is crucial. The second aspect serves a more challenging problem. It seems, however, difficult to solve it without paying a "price". The price is naturally uncertainty about actual behaviour. The use of the memory-judgement relationship (Hastie and Park, 1986; Robertson and Kassarjian, 1991) offers an opportunity. When a customer is asked about information on critical incidents on-line, which include consequential decisions for the relationship, similar critical incidents are suggested to be recalled from earlier periods of the relationship. Such a technique, CCIT (criticality critical incident technique) seems to represent a variant of CIT to be used in ongoing

Ongoing relationships				Switched-from relationships
Intended behavior	←————————————————————→			Actual behaviour
Method tools	CIT	SIT	CCIT	SPAT
Interviewing (questions)	Positive and negative discrete critical incidents	Sequences of discrete positive and negative critical incidents	Negative critical incidents including relationship consequence decisions	Negative critical incidents with consequence for switching
Analysis	Perceived quality, perceived dis/satisfaction	Perceived quality, perceived dis/satisfaction	Relationship strength	Factors of a switching path
Focus of the study	Ongoing relation-ships	Ongoing relation-ships	Ongoing relationships	Switched-from and switched-to relationships
Results	Attributes	Sequences of attributes	Attributes with consequence for the relationship	Switching paths including configuration of switching determinants

Table I.
A comparison of different critical incident techniques regarding their degree of consequence for the relationship

relationships, where the consequence for the relationship is included. The next step towards a consequence for the relationship regarding a critical incident is in Table I, represented by SPAT. The latter technique, however, has turned to the other side of the invisible boundary between intended and actual behaviour. When switching behaviour is studied using SPAT, actual behaviour is in focus. When SPAT is used, however, the difficulty of finding respondents is a limiting factor. Otherwise, it would represent a technique coming close to best possible for reflecting behaviour in connection with critical incidents. CCIT has the important advantage of making an application to ongoing relationships possible.

Table I depicts the differences among four kinds of critical incident techniques. First, traditional CIT is displayed, second SIT, third CCIT and fourth SPAT. Distinguishing characteristics are: interviewing, analysis, focus and results. There are two clear "families" of techniques in Table I. CIT and SIT include both positive and negative incidents and the analysis is based on attributes. The focus of the study is ongoing relationships and the results are reported as attributed (CIT) or benchmarked attributes (SIT).

The other "family" in Table I is represented by CCIT, which simultaneously is the conclusion of the literature review of this article, and by SPAT. The techniques of the latter family concentrate on negative critical incidents. They are distinguished by their focus, CCIT on ongoing relationships and SPAT on switched-from relationships. CCIT combines the way customers remember with the way respondents are interviewed during the interview situation. SPAT has the strength of including an actual consequence of the switching path. However, with respect to memory-judgment and online judgment decision by customers, the prediction of customer behaviour is made possible. Such a technique has not been used before as a CIT variant. Its strength lies in the ease of interviewing customers in ongoing relationships, compared to finding switched-from customers. In other words, CCIT may represent a technique to study intended behaviour, which comes close to studying actual behaviour.

When critical incidents are reflected and behavioural consequences are drawn, the on-line versus memory-based distinction concerning customers' way of making decisions mitigated much of the uncertainty regarding behaviour. We argue that it is a mistake to look for simple memory-judgement relationships in on-line judgement. In other words, it is not likely that a customer is capable of linking an evaluation of a single attribute to intended behaviour. That insight has implications for the use of critical incident techniques. At least it has implications for the final judgement concerning polarisation (Hastie and Park, 1986). For example, when a customer makes a decision concerning behaviour related to a critical incident, either positive or negative, the decision pattern is stored. If that situation occurs again and the same kind of decision is made, the former acts in favour of the decision. In other words, repeated critical incidents strengthen the predicting certainty of behaviour in the case when a distinct

judgement is repeated. These conditions are valid provided that customers made a decision regarding behaviour.

Discussion

The literature review concerns existing methods to capture and analyse critical incidents and their base in psychological literature. When critical incident techniques are confronted with time concerns, an interesting field of different application techniques opens up. That field includes groups of techniques which are distinguished by the kinds of consequences, if any, drawn from the occurrence of critical incidents. Two main groups of consequences are intended behaviour and actual behaviour. When actual behaviour is studied the behaviour consequence is clear. Among the techniques presented in Table I, SPAT represents a CIT-variant application on actual behaviour. When the aim of the study still is to look for relationship consequences, but the empirical study is done in ongoing relationships, the psychological realities establish boundaries for both ways of questioning and analysing. A technique based on psychological restrictions regarding remembering and reflecting of the incidents is suggested here. Such a technique has an advantage of motivating customers in ongoing relationships and is called CCIT. CCIT wins over SPAT by approaching customers in ongoing relationships, compared to the difficulty of finding customers who already have left firms. The price of the winning technique is uncertainty concerning behaviour. The other variants of CIT, in Table I called traditional CIT and SIT, do not have ambitions to include consequences of relationships other than those of the concepts of service quality and dis/satisfaction.

In this article a tentative theoretical framework for CCIT was discussed. The focus of the discussion was on the weight of critical incidents, time, memory, and the consequence for the relationship between service providers and customers. These concepts play a significant role when studying critical incidents. It is necessary to pay attention to respondents' abilities to remember past incidents in order to handle memory-related aspects correctly. If the way of asking is not congruent with the physical abilities, it is difficult to achieve valid results. We have discussed these matters in this article and conclude the discussion with Table II.

We argue in this article that critical incidents cannot be understood if we don't put them in the context of the individual customer's world. CIs rely on customers' perceptions of previous incidents stored in memory, judged by them to be critical and reported when asked by researchers in the form of narratives. It is therefore natural to go to the psychology literature to look for theoretical foundations, e.g. for the concepts, memory, judgement and time. Our contextual and memory-related approach for giving meaning to the concept "criticality", from the individual customers' point of view, is presented in this article.

In our new and so far tentative frame of reference for analysing and understanding the criticality of critical incidents, emphasising the customers' perspective and "world view", we have used concepts from psychology;

Concepts included in the framework	The significance of the concepts for criticality critical incident technique (CCIT)
Weight	Critical incidents ought to be dealt with differently in interview situations regarding whether the aim is to recall *positive or negative* critical incidents
Time	Critical incidents are stored in memory according to a *mobilisation and minimisation pattern*, therefore time affects critical incidents differently
Memory	When customers make judgement in situations, there is a need for *distinguishing between* judgement concerning *opinions* and judgement concerning *behaviour change*. The reason is two kinds of memory; a working memory and a long-term memory
History (relationship)	In order to portray *consequences for the relationship* based on past critical incidents, the retrieving of them is crucial
Prediction of behaviour	The importance of retrieving *judgement situations* from memory

Table II.
The theoretical
framework of CCIT

memory, judgement and time. The central points in our discussions were to distinguish between: negative and positive incidents; mobilisation and minimisation patterns; judgements concerning opinions from judgements concerning behaviour change; online memory and long-term memory when it comes to the judgement of critical incidents; and finally history and future of the relationship based on the occurrence and character of past critical incidents.

A new, preliminary way of approaching prediction of behavioural change, without studying actual behaviour, is suggested in a technique we call CCIT. The most critical issue in predicting behaviour seems to be how it is possible to retrieve incidents including judgement from memory. Our tentative theoretical framework is summarised in Table II.

Further research
It seems to be necessary to take into account research in other fields and disciplines to advance methods used within research in the field of services. This article has focused on one – CIT – a frequently used method in service quality and services marketing studies. Our discussion, drawing on some literature from psychology concerning aspects of human memory, has shown to be useful to deepen our understanding of the criticality of critical incidents.

The assumption is that new findings will emerge as new methods are developed. However, we suggest that the next step in the research process is to do one or two empirical studies using the suggested framework in this article. One key area in such a study is how data are or should be collected to reflect the criticality. In many studies, some of which we refer to earlier in this article, the researchers have not paid enough attention to the effects of how data are collected. One study may include standardised, repetitive and continuous services such as telecommunications services and financial services with infrequent human interaction. Another study may focus on more open and

people-intensive and dependent services – where the customer more freely decides each time which service provider to use – such as consulting services, restaurant services and health care.

When CCIT is applied to predict customers' future behaviour, it is possible to identify the stability of relationships. The potential of precision in such prediction becomes clear by adding use of methods and techniques, which are applicable to actual behaviour. Long-term approaches to relationships between service providers and customers offer opportunities regarding the suitability of the technique related to particular situations and approaches. Furthermore, to relate techniques capable of completing findings of predicting nature with techniques used for analysing actual behaviour may produce deeper understanding concerning the essential concepts for achieving results near to "the actual" regarding behaviour. We argue that, in critical incident studies in particular, we need to be more careful and specific when it comes to how data are collected and analysed. In qualitative research in general the research design issues are often discussed on a general and overall level. Therefore, empirical studies of different settings are necessary to deepen the understanding and knowledge of assigning the right method for the purpose of a certain study.

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