Summary (Samenvatting in het Engels)

Supply relations and perception; 
A study on the role of perception in managing supplier relations

Introduction
This research focuses on the determinants of supplier relation management paying particular attention to the role of perception. Supported by the open-systems approach (Boulding; 1965, Katz and Kahn; 1978) and the contingency theory (Lawrence and Lorsch; 1967) we adopt the view that people adjust their behaviour in managing supplier relations to their environment. In order to gain insight into the determinants of supplier relation management, our research focuses on understanding what influences the behaviour of an individual. We take the individual as level of analysis as individuals shape behaviour within organisations; they determine the management of supplier relations. Furthermore, it is the perceived environment to which an individual reacts and perception is subjective (Burrell and Morgan; 1979). Therefore, in order to understand the determinants on supplier relation management we dealt with two questions

- which factors influence the perception of purchasing practitioners?
- what does it mean for the way they manage supplier relations?

We used the perspective of understanding the influences on individual's behaviour and perception of the environment through the eyes of the individual involved and fits an interpretive research paradigm (Burrell and Morgan; 1979).

Theoretical framework – outline of the research

Prior to the construction of a conceptual model for our theoretical framework in this research, we reviewed relevant literature. We focussed on the factors that influence purchasing behaviour gaining a better understanding of the role of the individual, which is described in chapter 2. In this chapter we discuss purchasing models by Robinson and Faris (1967), Webster and Wind (1972), Sheth (1973), Johnston and Lewin (1996), the IMP-model (Håkansson; 1982), as well as the Transaction Cost approach (Williamson; 1975) and the resource dependence perspective (Pfeffer and Salancik; 1978). From this we conclude that an individual in an organisation is influenced in behaviour and perception through interaction with other individuals within the organisation; social influence plays a role. Further, for an individual within an organisational context, the environment to which behaviour is adjusted exists of an internal environment (organisational characteristics) and an environment external to the organisation.

Chapter 3 describes the construction of our conceptual model. It starts with a description of how we use the term perception: as the result of a perception process; a 'worldview' and we describe the perspective we take to study individual behaviour (3.1). Then we continue with the sensemaking process to gain more insight in perception and behaviour (3.2). The sensemaking process described by Weick (1979, 1995) was used to gain more insight into perception as result: to understand the perceived environment and there-upon adjusted behaviour. The sensemaking process is an external representation of the internal cognitive process but the internal process itself was further not studied in this thesis. The sensemaking process was further used to understand the external influences on perception and behaviour as it takes into account the social aspect of sensemaking. We used learning as it refers to change in behaviour and/or perception (Swieringa and Wierdsma; 1990) and to gain insight through this into the influences on why a certain behaviour and/or perception develops. Following on the sensemaking process, learning was firstly described from a cognitive perspective, after which we used a behavioural perspective to understand an individual's
external influences. Individuals learn through interaction within social groups. Within a social group individuals imitate others or are conditioned in a certain perception and behaviour (3.4). Conditioning happens through the feedback of other individuals (i.e. through rewards and punishments).

Within an organisation individuals influence each other. Individuals managing supplier relations participate in a social construction of the accepted worldview and matching behaviour (Pfeffer and Salancik; 1978, Burrell and Morgan; 1978, Nathan and Mitroff; 1991). Eden calls the outcome of this negotiation the Socially Negotiated Order (SNO) (1992). The negotiation takes place within a certain social order, which itself is also a result of negotiation. Eden terms this the Negotiated Social Order (NSO). The social status of an individual in this NSO determines his/her influence on the SNO. Social status determines the amount of influence an individual can exert on: (a) the way supplier relations are managed and (b) which external factors are relevant.

Individuals are not only influenced through conditioning within the social group of the present organisation but also in other social groups they are and have been a member of: their personal trajectory through social groups (3.4). This social space existing of a range of different social groups is called the 'habitus' (Bourdieu; 1972, 1977, Kamann; 1995). The habitus conditions individuals in a certain way of being and acting, and it gives direction to the future way of managing supplier relations.

The result of chapter 3 was a first theoretical answer to our questions: an individual's perception of factors in the internal and/or external environment to which the management of supplier relations is adjusted, is influenced by:

- the personal trajectory of an individual through social groups; the habitus,
- the Socially Negotiated Order (SNO) in the present organisation,
- the Negotiated Social Order (NSO); an individual’s social status in that organisation.

The management of supplier relations is described in more detail in chapter 4. We describe aspects upon which decisions can be made regarding supplier relations. This enabled us to recognise when individuals referred to the management of supplier relations, and to recognise the differences in behaviour between individuals. We differentiate between manifest and latent characteristics of relationships, the latent ones being influenced by the decisions made on the manifest ones. The main manifest aspects that are identified related to the management of supplier relations are: (i) the sourcing decision, (ii) the content of the interactions (and volume and diversity), (iii) the way of interacting, (iv) the duration of the relationship, and (v) the frequency of the interaction.

The factors of our conceptual model influencing supplier relation management are discussed in more detail in chapter 5. This led to indicators that enabled us to recognise the relevancy of the factors of our conceptual model in practice. For this we described different types of social groups, influences on one's social status, characteristics of an organisation (the internal environment), and ways to describe the external environment (see table 1).
Personal trajectory through social groups (habitus)

Groups in a private context
(i.e. family, friends, acquaintances, sport clubs, society clubs, religious and/or political associations)

Groups in a work related context
- present organisation (employer) + present or former job within same organisation
- former organisations (employers) + jobs
- education / courses
- internal contact networks
- external, general contact networks (conferences, contacts with research centres, consultants, clients, suppliers, trade fairs, unions, national purchasing meetings or presentations, books, magazines)
- external, specific contact networks (profession related groups, branch related groups, local industry associations)

Social Status

Hierarchical level (vertical position)

Degree to which individual (or department in which individual works) is integrated in the organisation:
- relations with top management (expressed involvement, open support, reporting to)
- relations with other hierarchical positions (same level and/or lower levels)

Individual's role:
- authority / responsibility versus support
- strategic versus operational

Educational level

Degree to which purchasing is a fulltime versus part-time job

Internal environment (organisational characteristics)

Production technology (project/small batch – large batch – process production)

Market strategy of the organisation (low cost – innovation differentiation – marketing differentiation)

Amount of different Product Market Combinations served with possible different strategies

Role of the organisation in the market (influence on specifications)

Organisation's orientation (on functional department or task) (i.e. technology, production, client/market oriented)

Organisational structure:
- Centralisation / decentralisation
- Degree of formalisation (standardisation of processes, output, input)
- Coordination through informal communication

Size of an organisation (amount of employees, turnover)

Characteristics of the purchasing need such as:
- Repetitiveness of the need (new task – modified rebuy – straight rebuy)
- Importance of the need in financial value and/or impact in primary process/end-product
- Complexity of the purchasing need

External environment

Actors in the task environment:
- clients, suppliers, competitors (substitutes, new entrants), governmental and regulative agencies, trade organisations, stakeholders such as: unions, environmental, and local associations

Segments in the social environment:
- economic, technological, political, cultural, legal, demographical, and ecological environment

Variable characteristics of the task environment:
- Uncertainty, transparency, dynamics, clusteredness (degree to which the environment is organised), diversity, scarcity, competitiveness

Variable characteristics of the social environment:
- Uncertainty, transparency, dynamics, diversity

Network characteristics:
- Density, connectedness/transitivity (degree to which actors in a network have relations with each other), size

Table 1: Indicators of the factors of our conceptual model

Methodology

The methodology that we used was extensively described in chapter 6. For the first stage of our empirical research, we adopted a qualitative research methodology. We conducted semi-structured interviews in order to find out which factors individuals perceive as relevant and to what degree this fits our conceptual model. This enabled us to understand supplier relations management through the eyes of those involved and to minimise our influence as a researcher. The factors of our conceptual model gave further direction to the interview when an individual touched on any of these topics, meaning that the structure of the interview depended on the interviewee (Ryan et.al; 1992, Strauss and Corbin; 1998). We used indicators for the factors as shown in table 1 below; these indicators have a 'signal function'. In order to find which relevant factors practitioners perceive, we asked individuals involved in managing supplier relations.

As an outsider we can only gain indirect understanding and insight into the outcome of the internal process of sensemaking with a certain perception as outcome through verbal data (March; 1994, Wetherell, Taylor and Yates; 2001). The factors in the environment the interviewee refers to as relevant for managing supplier relations are a reflection of his/her
perception. A validation interview was done after each interview in which the result of the first round was discussed and additional questions were asked. This was necessary in order to validate our own interpretation of what the interviewees said (Silverman; 1993, Shotter; 1993, Bood; 2001), and enabled the interviewees to give additional information. Besides, questions function as cues, triggering attention and further sensemaking, which can influence the result (Weick; 1979, Shotter; 1993, Pennink; 2004).

Causal mapping, a mental mapping technique, was used to draw up an external representation of an individual's perception of managing supplier relations (Huff; 1990, Bood; 2001). The individual's 'mental map' drawn up after the interview was used as input (feedback) for discussion in the validation round and as a tool on which the analyses of the interviews is based. The indicators for managing supplier relations and the factors in our model as described in chapters 4 and 5 were used to analyse the maps.

The interviews delivered insufficient insight into the role of social groups, which necessitated a second phase of empirical research focusing on part of our conceptual model. Exploration of the relations on a scale larger than in the interviews was necessary, between (a) 'social groups' and 'perception of relevant factors', and (b) 'social groups' and 'the management of supplier relations'. In order to gain an insight into these relations, findings were used from a survey. The data analysis was conducted using SPSS. Chapters 4, 5, and the interviews were used to construct the survey. A pilot study was done to enhance the survey's reliability and validity.

**Empirical research**

**Interview findings**

The interviews described in chapter 7 show that individuals differ in their ways of managing supplier relations and that they adjusted that behaviour to their environment. The practitioners referred both to certain organisational characteristics and factors external to the organisation. The interview findings reflect that the environmental factors which individuals find relevant are bound to subjective perception; there are differences between individuals, even within the same organisation. Furthermore, individuals differed in how they manage supplier relations in reaction to the same factor they mentioned as relevant. An individual's perception of factors in the environment and the way he/she manages supplier relations is influenced through social groups he/she is (or has been) part of. Social groups were found to condition individuals in perception and behaviour, lead to imitation of behaviour, and are used to gather information. Finally, an individual's social status appeared to determine his/her influence (relative to that of others) in managing supplier relations and the relevant factors to pay attention too.

The main organisational characteristics that individuals mentioned were: organisational structure, organisational goals and strategy and characteristics of the purchasing need.

The organisational structure played a role mainly through the degree of centralisation and formalisation in the organisation. These determined someone's influence and autonomy in a firm and thereby influenced one's social status.

Organisational goals and strategy determined what the supplier relationship needed to contribute too. Hence, these influenced the functional need and therewith the focus within a supplier relation and decisions on certain aspects (i.e. investments for innovation).

Characteristics of the purchasing need, like financial value and impact in the end product or primary process were used to differentiate between the importance of relations and ways they were managed. Repetitiveness of the need related to uncertainty, which influenced the ability to plan ahead and make arrangements with suppliers, and influenced supplier selection and the organisation's supply base. The production technology influenced the repetitiveness of the buying need.

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264 Corresponding with Weick: a map is a representation of the territory, but IS not the territory (1979).
The main factors mentioned regarding the external environment were variable characteristics such as dynamics or scarcity, which people anticipate and respond to. This supports the concept of ecological change in Weick's sensemaking process (Weick; 1979, 1995). Attention is triggered through the characteristics that vary, the perceived ecological changes. Behaviour is matched to the perceived environment, where otherwise routines drive behaviour. The variable characteristics were mentioned as limiting or expanding one's options in the management of supplier relations (i.e. better or worse deals, less or more scarcity in the supply market).

Actors in the task environment were relevant through the demands and characteristics that limited individual's options; i.e. in choice of suppliers, sourcing decision and the duration of the relationship. The practitioners seemed mainly to look at suppliers and the supply market in order to adjust their behaviour. Actors in the task environment were also mentioned as sources for the imitation of behaviour (cf. processes of isomorphism by Dimaggio and Powell; 1983).

Segments in the social environment describing a certain situation (i.e. of the economy), were referred to as relevant in expanding or constraining people's options in supplier relation management and/or leading to a certain focus of attention in a relationship (i.e. regulations). The influence of segments and variable characteristics of the social environment were exerted through the actors in the task environment (cf. Webster en Wind; 1972). The task environment was found to be the most relevant in shaping the management of supplier relations. There is a more direct effect through the direct interaction with the actors in the task environment.

Different social groups were referred to in order to explain behaviour and why certain factors were perceived as relevant.

Educational social groups (education/courses) and the present organisation an individual works for were found to condition individuals in how they manage supplier relations and which environmental factors they pay attention to.

Former jobs and organisations were also mentioned in relation to an individual's behaviour; individuals learned their present behaviour in former jobs and organisations.

General contact networks (i.e. universities, clients, competitors) led to the imitation of a behaviour, which was considered to be appropriate for different purchases and multiple relations. Specific contact networks (i.e. branch related and local industry associations), and networks within an organisation (i.e. in multinationals) led to imitation of behaviour related to a specific purchase and/or a specific type of supplier relation (i.e. a EP related relation). Finally, the general external networks, the internal contact networks, and the informal social groups (e.g. friends) had an informative role (cf. Håkansson; 1987). Through these social groups (social networks) information was collected regarding which supplier to use, a supplier's performance, and developments in the supply market.

Social status played a role in determining an individual’s influence on how to manage supplier relations and which factors to pay attention to.

Social status was in turn influenced by one's level in the hierarchy, whether or not purchasing had a strategic role, the educational level and the (relative) amount of purchasers in the firm (amount of FTE). Social status was mostly influenced by how strongly the individual and the purchasing department was embedded (integrated) in the organisation. This in turn was indicated (and thereby influenced) by the amount of top management support, and the degree to which other departments on a similar or lower hierarchical level supported purchasing and requested their involvement. The embeddedness of purchasing with other departments and functions was influenced through internal, informal communications and promotional activities. The latter seemed most relevant when purchasing was a support function.

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265 FTE refers to how many full time purchasing staff there is in the organisation (versus part time staff).
In conclusion, the findings of the interviews support our conceptual model. The indicators for the factors were (to different degrees) recognised and the factors in the model were found to be relevant as influencing the management of supplier relations.

The interviews also gave an additional finding: the role of critical incidents (7.5). Something is considered to be critical if it disturbs the usual way of doing things; when expectation and result do not match. Critical incidents can either be positive (exceeding expectations) or negative (disappointing results), but what is considered critical is subjective. This ‘disturbance’ fits the concept of ecological change as it triggers the sense-making process (Weick; 1979, 1995). Critical incidents lead people to adjust their behaviour and/or to focus on other environmental factors to make sense of what is happening to which subsequently behaviour is adjusted. After a successful result the behaviour and attention for certain environmental factors is retained in the retention phase of the sensemaking process and becomes part of someone’s frame of reference ready for future use. If applied successfully, attention will slowly fade and behaviour becomes a routine. This means that today’s behaviour in supplier relation management is directed by incidents in the past, based on environmental factors relevant in the past.

Critical incidents can be part of an individual’s own personal past, or can be part of the SNO in an organisation in the form of ‘myths’ or ‘stories’ through which one becomes conditioned. Two types of incidents were recognised: (i) incidents that disturb the fulfilment of the buying need, and (ii) those that influence someone’s social status through his/her involvement in supplier relation management (cf. inclusion issues by Schein; 1985).

Survey findings
The survey results described in chapter 8 show that relationships exist between: (a) the social groups an individual is and has been part of and that person’s perception, (b) the social groups an individual is and has been part of and that person’s behaviour, and (c) perception and behaviour. The latter means that individuals adjust their behaviour to the factors they claim to find relevant.

Following the findings of the interviews, the relationships between social groups and perception were mostly related to organisational characteristics and factors in the task environment. This being the most immediate environment, it provides the most immediate feedback on individual’s ways of managing supplier relations. Also on a more general level, we found that when having one of the backgrounds as mentioned in the survey, individuals find the own hierarchical position, predictability of clients’ demand, and intensity of the competition relevant. This indicates that these factors are generally considered to be important.

The survey showed that relationships exist between perception and the social groups related to education, present job, and former jobs in a functional area. This means that individuals working in a certain functional area become conditioned to pay attention to certain factors in their environment. Most of the relationships between membership of social groups and behaviour focus on the way of communication. The actual behaviour in managing supplier relations is mainly related to membership in educational social groups, which matches the findings in the interviews.

The limited relationships between social groups and behavioural aspects does not mean that individuals do not make decisions on other matters in supplier relations. It does mean that (i) when taking all the behavioural aspects into account there is diversity in how supplier relations are managed; attention for certain external factors that describe the situations in the survey is not translated in behaviour in a uniform way. It could also mean that (ii) some answers are only rhetoric; people say they pay attention to the external factors that describe the situations but do not act accordingly. This risk is higher in surveys due to preformulated answers than in the interviews in which we asked open questions.

Having a former job in purchasing showed the most relationships with perception. The relationships that were found support the idea of knowledge being context related (see 3.1).
and that similarity between contexts makes knowledge transferable and a purchasing job’s context being most similar to the context of managing supplier relations. Mainly individuals being purchasing consultants pay attention to parts of the task environment (supply market and competitors) for managing supplier relations, whereas purchasing managers generally focus on price. Individuals being responsible for purchasing policy generally pay attention to scarcity and technological developments in the supply market, whereas individuals responsible for the specifications and supplier selection generally do not pay attention to scarcity in the supply market. However, there are no relationships found between people with a background in purchasing and their behaviour in the different situations in the survey. This could mean that either people with purchasing experience behave differently in the same situation or that answers regarding the importance of certain external factors are rhetoric.

External factors that could be labeled as more strategic such as: the influence of the purchase on the primary process, the organisation’s strategy, and production technology are found more relevant by people with a background in strategic management or in operations (production). People that followed an education that focussed on legal aspects and (contract) negotiations find these factors less relevant whereas individuals with an operations background and a former job in purchasing generally only find the company’s production technology relevant. Only individuals with a background in strategic management or operations also have relationships with behaviour in the situations in the survey. Individuals with an operations background are inclined to use single sourcing in situation A and a relative short term relation for situation C, whereas people with a background in strategic management used multiple sourcing in situation A and longer term relations in situation C. Only individuals having a background in strategic management show a relationship with more strategic behaviour in situation A and B: they have more frequent contact, exchange more sensitive information, and make more specific investments in the supplier relations.

A relationship was found between a specific social group and the perception of supplier relation management. Individuals following (or having followed) a purchasing course by ‘NEVI’ in which Kraljic’ portfolio approach is taught use the Kraljic model for managing supplier relations and differentiating between relations more often. This is also the case for people who next to having done such a NEVI purchasing course, have a purchasing background and are NEVI member. When belonging to the latter group people find the impact of a purchase on the end product or service relevant, whereas there are no relationships between people that took ‘a NEVI purchasing course in which Kraljic was taught’ and factors in their environment they find relevant. Stronger relationships were found when people referred to the Kraljic names of the relations, instead of just referring to the Kraljic model. This means that membership of social groups provide a sound explanation for someone’s perception towards supplier relation management, but we have to be cautious not to be misled by rhetoric.

People who followed a NEVI course in which the Kraljic approach was taught show different behaviour in the situations A, B, and C, there is no agreement on how to behave in the different situations on a more operational level. However, we did find that individuals that attended a NEVI course in which Kraljic’ portfolio approach was taught (that advocates differentiation in behaviour), show more differences between the different situations in how they manage their relations. Related to this we did also find that the behavioural aspects on which people differentiate their behaviour are mainly limited to the communication medium (face-to-face, telephone, or e-mail/fax), and the duration of the relation with the supplier. This means that although the actual behaviour is very diverse, when people are taught to differentiate their behaviour in different situations, they indeed tend to differentiate more.

Although the correlation and regression analyses support our model, the explained variances ($R^2$) are relatively weak, which means the ability to predict is limited. However, factor analysis and CATREG analysis showed higher regression results and therewith relevance of our
model. Using our conceptual model and the interview findings explanations for the lower regression results can be given that further support the existence of relationships between the variables.

A first explanation for this is related to our survey design. To explore the predictability of relationships of social groups with perception and behaviour we used a rather abstract level of differentiation between social groups, using rather broad categories of social groups. Within the categories, differences are very likely to exist: a group related to a certain area like purchasing or marketing can consist of various subgroups having a different focus of attention within the same area. The broad categories give no insight into the specific focus of attention. Our example of the NEVI course gives more detailed information on the relation of a social group with perception, and with behaviour.

Second, the relationship of social groups with perception and behaviour are influenced by the social status of an individual, but this factor has not been taken into account extensively enough in the survey. Individuals can differ in their social status, being influenced to a different degree within their present organisation (according to the SNO), which, hence, disturbs the conditioning influence of other social groups.

Third, individuals have their own personal frame of reference, this being moulded through their personal trajectory through social groups and personal experiences. This means that even within the same social group within which individuals are conditioned, besides some overlap individuals will also differ to a certain extent in their behaviour and perception.

Finally, as the interviews showed, certain critical incidents influence people’s frame of reference. Critical incidents influence perception and behaviour, but when an experience is labelled as critical is subjective. Hence critical incidents disturb the conditioning influence of a social group.

The explanations above not only function as support for the relevance of our analysis, they also led to recommendations for further research as described later in this summary.

Integration of the theoretical and the empirical research
In conclusion, the research has shown that the factors in our conceptual model are relevant in explaining behaviour in supplier relation management. Individuals adjust behaviour in supplier relation management to their environment, which consists of organisational characteristics and factors external to the organisation. The factors in the environment to which behaviour is adjusted depends on someone’s perception.

The environment individuals perceive as relevant and the management of supplier relations that is perceived to fit this environment is influenced by the social groups he/she is and has been part of: someone’s habitus. Within social groups an individual is conditioned in a certain worldview: the factors to pay attention to and the appropriate behaviour. An individual becomes conditioned according to the SNO (the Socially Negotiated Order) of the organisation he/she works for: in other words the company view on how to manage supplier relations and why.

An individual’s social status in the NSO (the Negotiated Social Order), determines the extent to which he/she can influence or is influenced by the SNO. This thereby influences the degree to which an individual’s personal trajectory through social groups (his/her habitus) eventually influences perception and behaviour. This all fits with our theoretical framework.

The interviews showed an additional influence on perception and behaviour: critical incidents. The following figure shows the resulting conceptual model containing the factors that influence someone’s perception and the management of supplier relations.
Figure 1: The conceptual model; the influences on managing supplier relations

Relevance and recommendations

Our conclusion that individuals do adjust behaviour to their environment supports the open systems approach (Boulding; 1965, Katz and Kahn; 1978) and the contingency theory (Lawrence and Lorsch; 1967). We focused on the role of perception to bridge the gap between individual behaviour in managing supplier relations and the influence of the environment.

Further contribution lies in the perspective that was used; the perspective of the individuals involved. By using a cognitive mapping method a way is shown to study behaviour and perception from the perspective of the individual.

Our overview of aspects regarding the management of supplier relations on which decisions can be made provides a contribution to literature on supplier relations. The research led to a further theoretical understanding of the role of critical incidents in behaviour.

The main contribution however, lies in the conceptual model in which perception plays a central role: the overview and interrelationships of the factors that influence supplier relation management and a first operationalisation of the theoretical concepts in our model. For both academics and practitioners the model can serve as an analytical tool. Practitioners can further use (mainly) the chapters 2, 4, 5 and 7 for information on influencing factors, situations and examples that could be of assistance to the way they manage their supply relations.

Through the focus on factors that determine supplier relation management, our research also provides handles for changing this behaviour. Although we did not focus on change itself, we do give a few suggestions for the practical use of the determinants for change.

When selecting new employees in purchasing, attention to applicants’ membership in certain social groups can be used to select the person needed within the organisation. For example: someone with a production background for more production focus, or someone from a different industry with his/her different social networks and worldview for changing the present way of doing things.

Change in an individual’s behaviour and/or perception can be accomplished through forcing others’ membership of certain social groups or through own initiation, i.e. a certain purchasing course. To be given room within the own organisation to apply what is learned and support is then important as otherwise the ‘old ways live on’. Contact networks can be used for information on how to deal with relations in general, specific purchases, and supplier selection.

Change can further be accomplished through changes in the Neogiated Social Order (NSO), changing the social status of the purchasing function. The indicators shown in table 1
can be used, where special attention for the integration in an organisation is proposed as this
has shown to affect social status the most.

Finally, awareness of the role of critical incidents can trigger change. Routine behaviour
based on a past incident and circumstances, to which one no longer pays attention, may no
longer be the most appropriate due to changes in these circumstances. Also, awareness of
the past environmental factors that cause today's behaviour enables one to respond to
possible changes in these factors, preventing other critical incidents from occurring. The
critical incidents technique is proposed to elicit the incidents and circumstances of the past
(cf. Gummesson; 2000). For incidents that slowly build up to a critical level, individuals need
to be taught to look out for signals and develop routine reactions. The latter is only possible if
reactions are retained through experience in someone's knowledge base, ready for future
recall (cf. the retrospective sensemaking process by Weick; 1979, 1995). Staff can be trained
through simulating experiences and face-to-face contacts (Ten Pierick and Beije; 1998, Daft
and Lengel; 1984, Kamann and Bakker; 2004). For catastrophic incidents we propose risk
analysis asking: what could possibly endanger supply? For this purpose the supply chain
needs to be taken into account and contingency plans need to be made. Again, through
experience reactions need to become integrated in routines, i.e. through emergency drills.
Continuous feedback is necessary to stay alert (cf. Tazelaar en Snijders; 2004).

Two main areas have been identified for further research.

Firstly, as the research has been mainly exploratory, extended research on the relevance
of our conceptual model is proposed. The role of critical incidents in behaviour and
perception needs a further exploration, for example focussing on the relative role in relation
to the conditioning influence of social groups, categorising incidents, and how to recognise
them. Following the survey findings, the relationships between the factors of our conceptual
model need more study, paying attention to the influence of social status. We propose a
larger number of respondents for our survey using less broad categories for social groups
and/or conducting more structured in-depth interviews.

Secondly, further research is proposed that focuses on gaining a deeper insight into the
factors of the conceptual model. Further research can contribute to more insight into the
perception of the variable characteristics of the external environment by developing
indicators for these characteristics. With respect to social groups, more insight can be gained
into the relationships with a specific focus on one's perception and/or behaviour by taking a
more detailed look at different types of social groups. Also, more insight can be gained by
paying attention to specific cases that form outliers. Further, more insight is needed in the
indicators for social status: what is their relative role and impact on social status. Finally, to
be able to change behaviour and perception regarding the management of supplier relations,
further research is proposed in the process of conditioning, when this is successful, and how
to change social status. The latter enables change in the influence of purchasers within an
organisation: i.e. enabling purchasing to participate in and influence strategic discussions.