

An exploration of consumer resistance to innovation and its antecedents

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ABSTRACT

Although firms are faced by a large number of market introduction failures, research into a major driver of these failures, customer resistance to innovation, is surprisingly scarce. While most authors have investigated positive adoption decisions, this paper focuses instead on consumer resistance to innovation. The current study presents a conceptual framework which explicates the major components of consumer resistance: (1) rejection, (2) postponement, and (3) opposition, and discusses two main groups of antecedents to consumer resistance: (1) degree of change required and (2) conflicts with the consumer's prior belief structure. This framework is explored with both a literature review and a qualitative focus group study. These joint efforts result in the formulation of a model of consumer resistance. Finally, the authors discuss several relevant theoretical and strategic implications, and point out directions for future research.

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1. Introduction

Despite company efforts to adopt consumer-oriented innovation development processes focused on delivering added value to the consumer (Danneels, 2003), most commercial companies are faced with high rates of innovation failures (Moore, 2002). This is puzzling, as innovation adoption research has stressed that relative advantage is a dominant driver of consumer adoption. Nevertheless, many innovations still meet resistance (Garcia & Atkin, 2002; Molesworth & Suortti, 2002). The reasons for this resistance vary and have not as yet received a significant amount of study, but examples illustrate the diversity of innovations which meet resistance. For example, consumers expressed moral objections against genetically modified food, and actively campaigned against the introduction of these innovations (Bredahl, 2001; Fortin & Renton, 2003).

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Consumer resistance also appears in the case of simpler innovations. For example, many wine drinkers steadfastly refused to accept the screw cap as an acceptable replacement for the traditional cork on wine bottles (Garcia & Atkin, 2002).

While numerous studies explore factors that contribute to the “positive” decision to adopt such innovations (e.g., Lennon et al., 2007; Lin, Hsin-Yu, & Sher, 2007), understanding why customers resist adoption is at least as important (Midgley & Dowling, 1993; Szmigin & Foxall, 1998). While fundamental innovation research (Rogers, 2003) has always at least tacitly recognized this importance, empirical research in this field has been less active in investigating the nature and drivers of resistance compared to adoption. In particular, it is rarely the case that studies explicitly differentiate adoption from resistance; instead implicitly considering resistance as simply non-adoption (Nabih, Bloem, & Poiesz, 1997). However, it is not appropriate to conclude that consumer resistance is simply the obverse of adoption (Gatignon & Robertson, 1989; Herbig & Day, 1992; Ram & Sheth, 1989).

The objective of this paper is to develop insight into this relatively underdeveloped area in the innovation literature. The nature of the contribution provided is thus twofold. First, a detailed theoretical conceptualization of consumer resistance is developed. Ram and Sheth (1989) have provided an initial investigation of this concept, where they recognize that consumer resistance reveals itself in different forms of behavior, being rejection, postponement, and opposition, which appear similar to the ideas put forward by Coetsee (1999). Nevertheless, as suggested by Nabih et al. (1997), these concepts tend to lack standardized conceptual and operational definitions, and resistance itself appears to have been confused with the simple, and more passive, notion of ‘non-adoption’ (Peñaloza & Price, 1993). Following from this, with few noteworthy exceptions (e.g., Ram & Sheth, 1989), little research has been done on the antecedents which may create consumer resistance to innovations (Lapointe & Rivard, 2005). This article reports the results of a combined theory-driven and theory-generating study conducted according to the aforementioned objectives. First, an integrative overview of relevant literature is presented. Additionally, the methods and results of a qualitative focus-group study are discussed. Finally, limitations and directions for future research are detailed.

2. Literature review

While several authors have supported the notion of consumer resistance (Gatignon & Robertson, 1989; Ram, 1987; Sheth, 1981) and implicitly or explicitly acknowledged the importance of ‘negative’ or ‘anti’ consumption (e.g., Bredahl, 2001; Garrett, 1987; Herrmann, 1993; Kozinets & Handelman, 1998; Saba, Rosati, & Vassallo, 2000), there is little attention devoted to the thorough conceptualization of the concept of individual consumer resistance (Lapointe & Rivard, 2005; Peñaloza & Price, 1993). Moreover, that research which does exist is predominantly theoretical with little effort devoted to the empirical explanation and validation of consumer resistance. Therefore, a more in-depth discussion of the concept of consumer resistance is needed.

Innovation resistance is a response based on a conscious choice (Szmigin & Foxall, 1998), defined by Ram and Seth (1989, p. 6) as “the resistance offered by consumers to an innovation, either because it poses potential changes from a satisfactory status quo or because it conflicts with their belief structure.” Nevertheless, this broad definition of innovation resistance is not particularly illuminating, being as it essentially defines innovation resistance as ‘resistance to innovation’. One key issue of concern is that resistance includes not trying the innovation (Nabih et al., 1997; Ram & Sheth, 1989; Szmigin & Foxall, 1998). This is problematic because Rogers (2003) points out that initial objections toward an innovation can sometimes be overcome by offering consumers the opportunity to try the innovation for a certain period of time. Moreover, existing literature (e.g., Ram & Sheth, 1989; Szmigin & Foxall, 1998) suggests that innovation resistance can be further delineated from the basic ‘not-trying’ of the innovation into three distinct types of consumer behavior: rejection, postponement, and opposition.

Rejection: Rejection is not driven by a simple lack of awareness or ignorance about the innovation on the consumer’s part. Rather, this form of resistance implies an active evaluation on the part of the consumer, which results in a strong disinclination to adopt the innovation (Rogers, 2003). Lee and Clark (1996–1997) recognize that this reluctance is often induced by a suspicion of new and unproven innovations. In addition, Hirschheim and Newman (1988) contend that rejection is intertwined with an innate conservatism, i.e., a reluctance to change the status quo. An example of a food innovation that was rejected by the American market is McDonalds’ ‘Arch Deluxe’ burger, which had the slogan the “Burger with the Grown-up Taste”. While McDonalds positioned this new burger as a more sophisticated food product for adults, consumers did not really consider McDonalds as a provider of sophistication, but of convenience (Haig, 2003).

Postponement: Although consumers find an innovation acceptable in principle, they may decide not to adopt it at that point in time, for example until the circumstances are more suitable. In this case the decision is not final, and thus this definition is similar to Greenleaf and Lehmann’s (1995) “delay”, as a form of consumer resistance. For example, many consumers are waiting for voice over internet protocol (VoIP) technology to become more mainstream before considering adopting this technology. Currently, software and hardware for VoIP is readily available (e.g., Skype) and is in fact very easy to use. However, it is not regarded as a standard yet, and most consumers are still suspicious of what they regard as “unproven technology” (D’Errico, 2005).

Opposition: Consumers may be convinced that the innovation is unsuitable and decide to launch an attack – for example negative word-of-mouth – against its launch. Davidson and Walley (1985) describe this as innovation sabotage, where consumers actively engage in strategies to prevent the innovation’s success. Such forms of opposition, also referred to as “active rebellion”, are most likely to affect market mechanisms (Fournier, 1998). There are ample examples of consumer innovations

that have met opposition. A recent example is called “The Golden Cage”, an innovative TV program that was broadcast on Dutch television. This program showed a group of adults living in a house together, striving to be the last one left in the house by pestering the other candidates out. The program met significant opposition from various schools, parents, and even government spokespeople, that did not condone the promotion of pestering as a form of entertainment. This eventually led to low ratings and the premature cancellation of the show (Dekker, 2007).

2.1. Drivers of consumer resistance

Gatignon and Robertson (1989) explicitly call for research that investigates consumer resistance to innovation as a specific form of behavior, conceptually separate from innovation adoption. Several researchers claim that the characteristics defined in adoption research are not typically the factors which lead to active innovation resistance, and that resistance might prevail despite the presence of many ‘adoption-related’ characteristics (Garcia & Atkin, 2002; Ram, 1987). However, other researchers stress that studies on innovation characteristics such as Rogers’ diffusion theory may offer useful insights, and should therefore not be completely ignored (Herbig & Day, 1992; Molesworth & Suortti, 2002; Ram, 1987). Consequently, the current discussion complements such theoretical reflections on consumer resistance theory with Rogers’ perceived innovation characteristics, in order to create a broader perspective on this important issue.

The factors that drive consumer resistance can be split into two main types (e.g., Gatignon & Robertson, 1989; Herbig & Day, 1992; Martinko, Henry, & Zmud, 1996; Ram & Sheth, 1989). First, innovations which require a change in consumers’ established behavioral patterns, norms, habits and traditions are likely to be resisted. Second, innovations which in some way cause a psychological conflict or problem for consumers are likely to be resisted. Similarly, Tornatzky and Klein (1982) conclude that compatibility, defined as the degree to which an innovation is perceived as consistent with existing values, habits and past experiences of the potential adopter, is one of the few factors of Rogers’ theory that consistently relates to adoption. However, the operationalization of this variable is inconsistent across studies, including conflicts with values (e.g., Cho & Kim, 2001–2002), societal norms (e.g., Taylor & Todd, 1995), daily routines and habits (e.g., Tornatzky & Klein, 1982), and consumer lifestyle (e.g., Kleijnen, de Ruyter, & Wetzels, 2004). This variety has led to confusion with regard to the construct of compatibility, and a recent study by Karahanna, Agarwal, and Angst (2006) confirms the importance of disaggregating the construct with regard to the specific compatibility issues that might arise. Thus, in line with theory on consumer resistance, an explicit distinction between conflicts with traditions and norms, which relate to a societally-relevant context, and conflicts with existing usage patterns, which refer to the personal routines and habits of individual consumers, seems appropriate.

Considering *traditions and norms*, any behavior that is contrary to group norms, or societal and family values, creates a barrier (Herbig & Day, 1992). As suggested by Bredahl (2001), innovations that can potentially transform future life tend to generate high levels of social involvement. This does not only imply the disruption of values related to this particular innovation, but also the extent to which the acceptance of such an innovation might lead to highly undesirable (unforeseeable) consequences for society (Saba et al., 2000). For example, consumers may worry that by accepting genetically modified food they are slowly adapting societal norms to become more open to genetic manipulation of the DNA of humans, an issue that currently is considered unacceptable by society as a whole.

Secondly, several researchers (Foxall, 1993; Foxall, 1994; Ram, 1987; Sheth, 1981) argue that when consumers are satisfied with their current situation, they have no desire or reason to change. Sheth (1981) points out that resistance is sometimes a consequence of habits. These habits are formed when a customer uses a product frequently over a long period of time. Thus, it is not surprising that innovations which *conflict with the usage patterns* of competing and well-established products (e.g., a piece of software not compatible with Microsoft Windows), or that contradict well-established workflows, practices, or habits, will face resistance (Hurter & Rubenstein, 1978; Oreg, 2003). In this situation, other routine behaviors must change before the innovation achieves acceptance.

In terms of psychological variables, theory suggests that the *perceived product image* of an innovation should have an influence on resistance. Literature on innovation adoption has often implicitly conflated image with relative advantage (Rogers, 2003). However, several researchers call for a more explicit investigation of this variable, and empirical studies support such pleas (Chau, 1996; Kleijnen, de Ruyter, & Andreassen, 2005; Tornatzky & Klein, 1982). In particular, when studying innovation resistance, image serves as an extrinsic cue that consumers use as a signal to base their decisions on. This is in line with Bearden and Shimp (1982), who argue that extrinsic product cues are important for consumers to assess new products. As the actual product characteristics and functioning of an innovation may be hard to observe, the image is likely to be derived from stereotypes, rumor or other indirect, non-experiential, sources (Ram & Sheth, 1989). Additionally, a certain identity might be obtained from the innovation’s origins, for example the product class or industry which it belongs to, or the country of origin. Recent research has also suggested that negative media coverage can induce negative image perceptions of innovations (Fortin & Renton, 2003) that lead to resistance (Ram & Sheth, 1989).

Innovation research points out complexity as another important impediment to adoption (Rogers, 2003; Tornatzky & Klein, 1982). This complexity relates to the extent to which an innovation is difficult to use and understand. The cognitive effort related to innovation adoption is increasingly receiving scholarly attention (e.g., Kleijnen, de Ruyter, & Wetzels, 2007), and is stressed as a contributor to innovation resistance (Oreg, 2006; Ram, 1989). More particularly, information overload is recognized as a factor which is growing in importance as choices of consumers are increasing. *Information overload* can be defined as a response to the ever-increasing rate of information, knowledge, and innovations that emerge (Herbig & Kramer,

1994). This makes it difficult for the consumer to organize and evaluate all the information and make comparisons between the available alternatives (Herbig & Day, 1992; Hirschman, 1987). Similarly, Malhotra (1984) argues that consumers' processing capacity can become overloaded if they try to process too much information in a limited time, leading to dysfunctional consequences such as cognitive strain (Herbig & Day, 1992). This is supported by Keller and Staelin (1987) who argue that too much information damages the effectiveness of any single piece of information.

Resistance towards innovations is also influenced by consumers' awareness of the *perceived risk* of adopting an innovation (Shoemaker & Shoaf, 1975). Consumers often experience many uncertainties about the adoption of innovations, especially with regard to performance (Garcia & Atkin, 2002), and consequently assume the likely outcome of innovation usage to be negative (Martinko et al., 1996). It is consumers' evaluation of the likelihood of these negative outcomes which constitutes their perceived risk. Literature has defined several forms of risks, of which physical, economic, functional, and social risk have been mentioned in relation to consumer resistance (Bredahl, 2001; Ram & Sheth, 1989; Saba et al., 2000). Physical risk concerns consumer perceptions of the potential damage to persons or property which may be caused by the innovation (Klerck & Sweeney, 2007). Economic risk is related to the cost (in a general sense) of an innovation. For example, Noussair, Robin, and Ruffieux (2004) find that, contrary to popular belief, a substantial amount of their sample was willing to buy genetically modified food if it was sufficiently inexpensive. Functional risk is concerned with uncertainty about performance of the innovation. Finally, social risk refers to whether or not consumers feel that their social environment (e.g., reference groups) will accept or support their adoption. The latter is strongly related to observability as defined by Rogers (2003). Peer observation is an important factor in the consumer decision process, and lack of social support could potentially cause users of a socially-unaccepted innovation to isolate themselves from their social system.

Despite the previous work on the different types of consumer resistance and its many antecedents, there is a dearth of empirical evidence regarding whether different forms of resistance have distinct antecedents. Table 1 summarizes the scholarly research on consumer resistance. The table illustrates that empirical evidence specifically focusing on resistance is scattered, and that a systematic approach to investigating the differences in drivers of various resistance forms is lacking. Particularly conspicuous is the absence of evidence regarding opposition. This is striking, as an initial investigation of the literature seemed to reveal a plethora of studies on outright opposition and consumer actions against innovations. However, this type of research has mostly focused on collective actions such as boycotts and protests, whereby the antecedents are often outcome related, such as the expected success of the action itself (e.g., Garrett, 1987; Sen, Gurhan-Canli, & Morwitz, 2001). Nonetheless, antecedents related to the innovation itself have received little study.

Despite the lack of empirical attention, there is some anecdotal evidence to suggest that it should not be assumed that each antecedent has an equal impact on consumer resistance, either as a whole or on each separate type. For example, Szmigin and Foxall (1998) suggest that postponement is more likely to be driven primarily by situational factors. These patterns are often witnessed with technology-related innovations, where consumers often worry that by investing too early in such innovations, they are at risk of rapid introductions of new and improved versions leaving them with obsolete equipment (Dhebar, 1996). This was exactly the situation in the 1970s, when early buyers of Sony Betamax found themselves in a quandary when VHS entered the market and quickly became dominant. Additionally, consumers often postpone their innovation decisions until they have been able to process more information about the innovation (Szmigin & Foxall, 1998). Rejection however seems to be driven by inertia to a large degree, implying that usage patterns might be more influential for this form of resistance (Ganiere, Chern, Hahn, & Chiang, 2004). Woodside and Biemans (2005) add that rejecters favor the status quo because they are highly concerned about financial, performance and personal risks, and are therefore more comfortable with sticking with what they know best. Finally, opposition seems to be strongly driven by tradition and norms. A contemporary example is RFID (radio frequency identification) technology. Consumers are concerned about the impact of this technology on society and believe that the constant monitoring of their behavior is in conflict with societal ethics (Thiesse, 2007). While these are incidental cases, they do suggest the presence of differences in the drivers underlying the different forms of resistances. In turn this illuminates a number of quandaries in our present understanding of the underlying forms of consumer resistance to innovations, as well as their antecedents. Hence, a more in-depth perspective on the drivers of the various resistance types is called for. We considered that a qualitative research method was ideally suited to this task.

3. Research method

Given the need for more detailed insights into both consumer resistance itself as well as its antecedents, a qualitative focus-group study was conducted. Focus groups are particularly appropriate for our purposes, since they allow insight into the social aspects of innovation resistance, which previous research has argued may be a crucial factor. This technique affords us the opportunity to observe the collective sense-making of individuals with regard to innovation resistance decisions (such as participants probing and challenging others' opinions), and also to generate a wider range of views, which is important for theory-generation (Bryman, 2004). The research objectives are clearly subsumed within Fern's (2001) theory applications approach, by using focus groups to develop and (in part) confirm theory. Eight focus group discussions (three each on the subject of 'rejection' and 'opposition', and two for 'postponement') were conducted, a number broadly consistent with similar research across various fields (e.g., Morgan & Spanish, 1985; Pavia & Costa, 1993).

About 58 subjects (34 males and 24 females) were approached on the streets of the central shopping precinct within a major city in the Netherlands according to the criteria that they appeared to be below 30, and to be active consumers. As

Table 1

Literature overview: drivers of consumer resistance.

| Driver | Description | Source | Nature of the study | Relevant findings |
|-------------------------|---|---|--|--|
| Traditions and norms | Inherited body of customs and beliefs within a relevant social context | Herbig and Day (1992) | Conceptual | Suggest that culture and society create so-called diffusion thresholds, when innovations go beyond this threshold they will be resisted |
| | | Hirschman (1987) | Conceptual | Suggests that innovations that are closer to traditional norms are more acceptable, whereas innovations that deviate from these ideas (i.e., innovative day care centres) are resisted at first |
| | | Ram and Sheth (1989) | Conceptual | Suggests a negative relationship between societal disapproval and resistance. Expected to be particularly present for eating customs, as they are strongly culturally embedded |
| Existing usage patterns | Habitual behavior formed when using a product frequently over a long period of time | Foxall (1993) | Quantitative – survey | Finds that adaptors, who have a high level of commitment to a coherent behavior pattern, are more likely to resist food innovations |
| | | Herbig and Day (1992) | Conceptual | Suggest that incompatibility of the innovation with existing workflows creates a consumer acceptance barrier |
| | | Oreg (2003) | Quantitative – survey | Finds that routine seeking is an important contributor to resistance to change in a variety of contexts |
| | | Ram and Sheth (1989) Szmigin and Foxall (1998) | Conceptual Qualitative – interviews | Suggests a negative relationship between changes in daily routine and resistance Consumers reject innovations that are offered via a medium that is incompatible with their existing usage patterns |
| Perceived image | Unique set of associations within the minds of customers, based on e.g., the product category the innovation belongs to, the manufacturer that produces it, or the country where it is produced | Ram and Sheth (1989) | Conceptual | Suggests a negative relationship between unfavorable image and resistance. |
| | | Molesworth and Suortti (2002) | Qualitative – interviews | Finds a negative relationship between unfavorable image and resistance |
| Information overload | A user's response to the ever-increasing rate of information, knowledge, and innovations | Herbig and Day (1992) | Conceptual | Suggest that when consumers are overwhelmed with information and cannot accurately compare existing alternatives to the innovation, this creates a situation where he/she becomes impervious to further change |
| | | Herbig and Kramer (1994) | Conceptual | Suggests that information overload can have an adverse effect on consumer decision making when this overload exceeds consumers' processing capabilities |
| | | Hirschman (1987) | Conceptual | Suggests that dealing with overwhelming amounts of information with regard to innovations and alternatives complicates decision making and generally leads to resistance toward novelty |
| | | Oreg (2006) | Quantitative – survey | Finds that more information has a negative impact on resistance |
| Physical risk | Concern that the innovation might be harmful, unhealthy or cause injury | Ram and Sheth (1989) | Conceptual | Suggests a negative relationship between physical risk and resistance. Fear for innovations is especially recognized for chemical products and processed foods |
| | | Bredahl (2001) | Quantitative – survey | Perceived risks with regard to harmful, health related effects of genetically modified food negatively affect consumer evaluations of these food innovations |
| | | Saba et al. (2000) | Quantitative – survey | Perceived risks with regard to harmful, health related effects of genetically modified food negatively affects consumer behavior with regard to these food innovations |
| | | Ganiere et al. (2004) | Quantitative – survey | Perceived risks with regard to harmful, health related effects of genetically modified food causes consumers to oppose these innovations |

Table 1 (continued)

| Driver | Description | Source | Nature of the study | Relevant findings |
|-----------------|---|-----------------------------|---------------------------|--|
| Economic risk | Concern that the innovation will be a waste of economic resources | Dhebar (1996) | Conceptual | Suggest that particularly high-tech innovations often require high investments which makes consumers worry reluctant to spend such amounts of money as they worried about how well spend this money really is on a long-term basis |
| | | Noussair et al. (2004) | Quantitative – experiment | Find that consumers' reluctance to buy genetically modified food decreases when price decreases |
| | | Ram and Sheth (1989) | Conceptual | Suggests a negative relationship between economical risk and resistance. This type of risk is expected to be especially relevant for technology-related innovation. Consumers will speculate about future lower prices, which lead to postponement |
| | | Szmigin and Foxall (1998) | Qualitative – interviews | Consumers <i>postpone</i> adoption until they feel they can afford the innovation |
| | | Woodside and Biemans (2005) | Conceptual | Suggest that financial risk leads to rejection. |
| Functional risk | Performance uncertainty | Ram and Sheth (1989) | Conceptual | Suggests a negative relationship between performance risk and resistance |
| | | Szmigin and Foxall (1998) | Qualitative – interviews | Consumers postpone adoption until they are assured that the innovation functions properly |
| | | Woodside and Biemans (2005) | Conceptual | Suggest that functional risk leads to <i>rejection</i> |
| Social risk | Concern that the purchase of the innovation will not be approved of by relevant others (direct social circle) | Ram and Sheth (1989) | Conceptual | Suggests a negative relationship between social risk and resistance in various contexts |
| | | Fain and Roberts (1997) | Conceptual | Suggests a negative relationship between social risk and resistance, particularly for high-tech innovations |

younger consumers are more likely to have experience with innovative products (Parasuraman, 2000), this demographic group is the primary focus. Specifically, studying consumers who are more open to innovation adoption increases the chances that they have considered adopting innovations which they decided against, which was important to the study. Consequently, subjects were asked a screening question to ensure that they had in the recent past made a conscious decision not to adopt a new product or service. Those who passed through this screening (approximately 90% of those who had agreed to be questioned) were then allocated into focus groups specific to the three different forms of resistance. Each focus group consisted of between 6 and 9 individuals (Fern, 2001, p. 161). However, actual group size on the day varied due to practical constraints such as respondent availability. Table 2 shows the demographic characteristics of each focus group.

All focus groups lasted between 1.5 and 2 h. Data were collected through written notes and audio tape recording of all groups. Each group was moderated by a single member of the research team, and observed by another, who provided a useful cross-check and additional note-taking facility. Each focus group dealt with a single type of resistance as defined earlier, allowing the depth necessary to develop theory. The groups began with a friendly welcome and explanation, followed by various exercises and tasks to generate the type of permissive and non-judgmental environment necessary for unguarded disclosure (Krueger, 1988). The moderator began by collaboratively discussing the 'type' of resistance that the focus group was to explore (either rejection, postponement, or opposition), both to investigate the content of that form, and also to ensure that participants should only discuss resistance activities that fitted that definition. Subsequently, participants were asked to explain a situation where they recently resisted an innovative product, which was used as a starting point for

Table 2
Focus group descriptives.

| Group no. and topic | Males | Females | Ages | Average age |
|---------------------|-------|---------|------------------------------------|-------------|
| 1. Rejection | 3 | 4 | 25, 21, 22, 23, 20, 21, 23 | 22.1 |
| 2. Rejection | 6 | 2 | 19, 23, 22, 21, 20, 21, 19, 23 | 21 |
| 3. Rejection | 6 | 3 | 21, 20, 25, 21, 25, 22, 19, 24, 24 | 22.3 |
| 4. Postponement | 2 | 4 | 19, 22, 21, 24, 23, 23 | 22 |
| 5. Postponement | 5 | 2 | 26, 23, 24, 20, 22, 21, 22 | 22.6 |
| 6. Opposition | 4 | 4 | 25, 20, 21, 25, 26, 21, 22, 25 | 23.1 |
| 7. Opposition | 4 | 2 | 25, 22, 23, 20, 21, 19 | 21.7 |
| 8. Opposition | 4 | 3 | 24, 23, 20, 21, 19, 23, 25 | 22.1 |

the rest of the discussion. The moderator used a discussion guide, which was mainly to structure the topics to cover (e.g. defining resistance, generating and discussing different drivers, etc.), rather than specifically 'forcing' respondents to discuss drivers which had emerged from prior theory. In this way, the structure of the discussion was kept fluid, and participants were able to direct the conversation along their own lines (critical to later analysis). During the interaction, the moderator was extremely careful to encourage views of all different types, and also to probe carefully into respondents' opinions, attitudes and their associated reasoning and motivation. In doing so it was hoped that any major problems with respondent 'impression management' could be avoided or at least recognized and incorporated into the analysis.

In keeping with the mainly exploratory goals of the research, little direction was pre-specified for each group. Participants were first taken through a brainstorming exercise where they generated examples of innovative products that they had resisted in the recent past. This exercise was used to help participants generate ideas through a process of 'snowballing' and comparison. While there were many different specific innovations named, for each focus group the examples generated by participants tended to fall into three different product categories; food, domestic appliances, and electronics (although a very small minority fell outside these categories). The moderator then used the examples to drive the group discussion. Furthermore, as the participants themselves defined the products to discuss at this early stage, the discussion was strongly centred on those products and categories. The overall design therefore allowed a good amount of consistency in terms of the overall product categories discussed over the eight groups, although for each group the specific examples were different.

The data were analyzed using a combination of inductive and theory-based approaches. Specifically, literature-based research had suggested a set of concepts which seemed likely to have an influence on resistance. However, particular care was taken to avoid prejudging either the non-existence of any additional concepts, or the specific relationships of any concept to the various types of resistance. In specific terms, the analysis was structured by a process of meaning condensation and categorization, driven by a hermeneutic process of iterative overall reading and detailed coding and analysis (e.g., Holbrook & O'Shaughnessy, 1988). Thus, the focus groups transcripts were treated as 'documents', and an initial protocol for coding and analysis of the full data set was developed through theoretical research and initial holistic readings of a subset of the data. This follows the qualitative document analysis approach of Altheide (1996), as well as in part the approaches taken to interview analysis in previous economic psychology research (e.g., Dittmar & Drury, 2000; Luomala & Laaksonen, 1999). The protocol was then subject to examination by a team of three academic experts who were not part of the author group.

The detailed coding process used a content analysis method which drew from both qualitative media analysis (e.g., Altheide, 1996), and the traditional content analysis approach more familiar to many researchers (e.g., Kassirjian, 1977; Kolbe & Burnett, 1991). The unit of analysis was the theme, or "single assertion about a subject" (Kassirjian, 1977, p. 10), rather than a simple count of specific words or phrases. Statements by individual respondents were broken into discrete themes before categorization (Kassirjian, 1977), and these utterances were categorized according to their closeness to the various categories in the protocol (Altheide, 1996). To enhance objectivity a multi-researcher strategy was used. Specifically, a researcher not part of the author group was trained in the use of the protocol, and then conducted the content analysis. The coding of the entire data set was then cross-validated by two independent coders, also not part of the author group. Rust and Cooil's (1994) proportional reduction in loss (PRL) measure was utilized to assess reliability. There were a total number of 1925 units extracted, each of which could be coded into one of eight possible categories, and three independent judges. The proportion of coding agreement between the three judges over the data set was 0.95. Using tables provided by Rust and Cooil (1994) this gives a PRL reliability of 100, which is the maximum possible. However, Rust and Cooil (1994) only provide tables for up to five categories. Even so, Perreault and Leigh (1989, pp. 141–142) argue that a greater number of categories will lead to higher reliability, and explicitly show how their measure of reliability exhibits this behavior up to nine categories. As the Perreault and Leigh (1989) measure of reliability is simply a special case of the PRL measure (Rust & Cooil, 1994, p. 6), the PRL of 100 reported here can be taken as a useful indication of reliability.

4. Results

In looking at the results as a whole, some interesting patterns became clear. Even though the moderator made strenuous efforts to let the conversation evolve naturally concerning the causes of resistance, virtually none of the data provided from the focus groups fell outside the general scope of antecedents which had been previously discussed in the literature. This is surprising, since most of the existing work on the antecedents to resistance is purely theoretical, with little empirical investigation (e.g., Bagozzi & Lee, 1999; Peñaloza & Price, 1993; Ram, 1987; Ram & Sheth, 1989). However, the primary objective was concerned with the potential variation in importance of these different antecedents, and, in this area, the findings provide a considerable contribution. Most strikingly, under 2% of all the quotes from all the groups related to the 'information overload' antecedent, leading to the removal of information overload from the set of antecedents to resistance. This observation runs counter to existing theoretical work, which conceptualizes overload as an important antecedent to resistance. In particular, we expected postponement to be influenced by information overload (Mitchell & Papavassiliou, 1997; Szmigin & Foxall, 1998). However, the respondents in our research did not perceive information overload as an important issue. By contrast, the other antecedents were all discussed at length in the focus groups. Product usage patterns were the subject of 24% of quotes, perceived image 21%, and traditions/norms 12%. By far the most common antecedent discussed was risk, with 41% of quotes relating to this antecedent. The most commonly-mentioned type of risk was functional, with economic risk also popular. By contrast, physical and social risks were discussed only sporadically. Moreover, there were interesting patterns

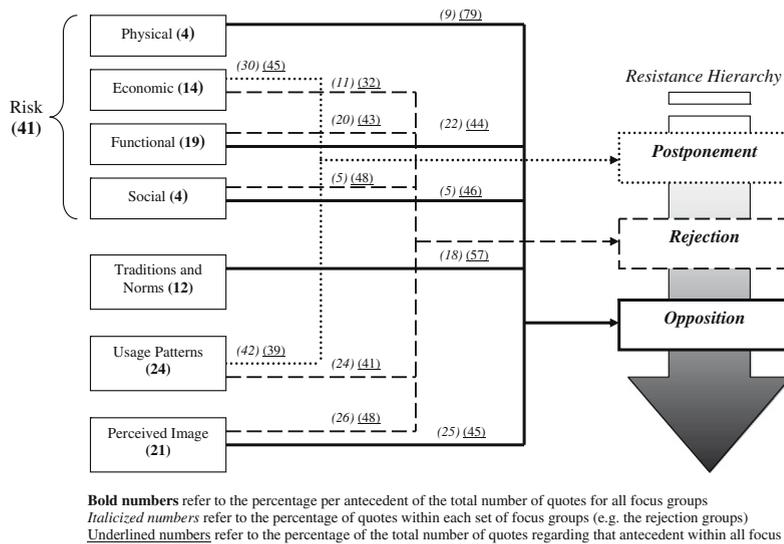


Fig. 1. The resistance hierarchy.

evident in the different types of antecedents which were relevant to the three different resistance types. Fig. 1 provides a graphical representation of the focus group findings, and how the different antecedents were related to the three different types of resistance.

Of particular interest in Fig. 1 is the pattern of relevance of the antecedents to each type of resistance. In order to gain a basic idea of how relevant each antecedent was to the different resistance types, three different ways at the comparative percentage of times each antecedent was mentioned were utilized (see Fern, 2001). The first comparison has already been discussed, between the different antecedents across all focus groups (the **bold numbers** in Fig. 1). Subsequently, two other comparisons were of interest. First was the relative percentage of times each antecedent was mentioned within the focus groups regarding a single resistance type (the *italicized numbers* in Fig. 1). For example, out of all the times antecedents were mentioned in the postponement groups, 42% were concerning usage patterns. Secondly, the underlined numbers in Fig. 1 represent the percentage of the comments about an antecedent across all focus groups, which occurred in relation to each type of resistance (e.g., out of all the times physical risk was mentioned, 79% were in the opposition groups). For each type of resistance, an antecedent was considered relevant if this number was large (over 30%). These three different proportions are considered to be valid indications of the relative importance of the antecedents for a number of reasons. Firstly, the moderator was conscious of letting each group develop naturally, rather than forcing groups to discuss all antecedents. Thus, the amount of times each antecedent was discussed should not be biased by the moderator, and instead should indicate the importance of that antecedent to the respondents. Secondly, while group size varied between 6 and 9, the average size of the groups for each type of resistance is very similar (8 for rejection, 7 for opposition, and 6.5 for postponement). Therefore, the numbers should be good indications of the relative importance of the antecedents in general (in **bold**), and within each type of resistance (in *italic*). However, the decision to only use two postponement groups may have influenced the relative frequency across resistance forms for each antecedent (the underlined numbers in Fig. 1). This is a possibility, but it is unlikely to have made a major difference to the current findings, as it is only liable to have increased the relative frequencies for each antecedent within the postponement groups by a small amount. For example considering 'social risk', the underlined numbers show that over 90% of the times it was mentioned occurred in the rejection and opposition groups. The situation is similar for the other antecedents which currently are not considered relevant to postponement. Thus, there is little scope for a significant change in proportions (i.e., large enough to influence the current findings) to occur with an extra postponement group, especially given the cutoff of 30% relative frequency.

This emphasis on the relative frequency of categories is consistent with a thematic content analysis method, as it is the patterns in the data rather than the absolute numbers of quotes which provide content analysis with its meaning (see Franzosi, 2004). However, it is important to reiterate that the division of large sentences into theme units, and the allocation of these units into antecedent categories was based on a rigorous qualitative content analysis methodology (detailed earlier), rather than simplistic criteria such as whether a unit included a specific word (such as 'risk'). Thus, the numerical data in Fig. 1 should be interpreted as another way of shedding light on the complex qualitative picture of consumer resistance, and is only truly insightful in combination with the discussion of the data.

Looking at the emergent patterns (Fig. 1), the data seems to suggest a somewhat *hierarchical* pattern among the three different types of resistance, moving from postponement, to rejection, to opposition, depending on both the amount and type of antecedents present. More specifically, if an innovation is likely to change existing usage patterns and has an economic risk,

then consumers are likely to resist by postponing adoption (the weakest form of resistance). However, when these two factors are combined with a functional risk, a social risk, and a poor image, consumers will resist by rejecting that innovation. Finally, when functional and social risks are combined with poor perceived image, a conflict with existing traditions and norms, and the perceived risk of physical harm, consumer resistance is likely to be expressed by active opposition (the strongest form of resistance).

The hierarchical pattern suggests that not only do the resistance forms differ in terms of the number of antecedents, but also in their general nature. Comparing postponement to rejection, the emphasis seems to move from more basic, practical concerns in the case of postponement, to more societal concerns such as tradition and norms where rejection is concerned. Such issues become even more prevalent, and also include physical harm, as the resistance form becomes more pro-active. This is in line with ideas presented by Peñaloza and Price (1993). It seems that opposition to innovation is somehow bound up with the idea of the “citizen” within the consumer, where consumers feel the need to be pro-active to the extent that they feel their society and associated values and norms are threatened. Research has documented such demonstrations of systematic action of the market against particular innovations (Moisio & Askegaard, 2002; Ritson & Dobscha, 1999). Conversely, innovations that are met by postponement appear to face some less fundamental concerns and confronted with barriers that – in part at least – might be less difficult to overcome for the individual consumer or the marketer (Szmigin & Foxall, 1998). In the following sections, the individual results for each concept in the model are discussed.

Postponement. Beginning with postponement, findings from the groups which focused on this type of resistance suggested that there were two main factors that – if present – would lead consumers to postpone rather than adopt an innovation. After discussion, the definition of postponement itself was agreed to concern *an active decision to not adopt an innovation at that moment in time*. This decision seemed to be most influenced by the risk consumers saw in the adoption of the product. However, unlike the other types of resistance discussed below, by far the most influential type of risk was economic. One key component of this risk was concerned with the fact that consumers felt that in their current situation they were unable to afford an innovation, such as “I can not afford it because I do not have a job right now”, and “I first need to have the possibility to afford one”. However, consumers also referred commonly to the increased long-term expenditure of buying or using an innovation, for example: “It is more expensive per brush as you will use more toothpaste on it”, or “I will not pay for a newspaper which I could get for free”. A similar but distinct set of comments referred to an expectation that price may come down in the future, such as “it has not come on special offer yet” and “a DVD-recorder is too expensive yet”. It is important to note however that economic risk as conceptualized here is not only to do with the ability to afford the innovation now or in the future, which can be seen in comments such as “I have the money, but I’m not prepared to spend it on this product”. Rather economic risk also concerns the issue of whether or not purchasing the innovation is really a good investment in the long run. These concerns are illustrated by quotes such as, “I’m not sure what is still coming, so it might be a waste of money”, and “it’s nonsense to spend money on this”.

A conflict with existing usage patterns was the other primary driver of postponement, with 42% of quotes in the postponement focus groups referring to this (nearly 40% of all quotes regarding usage patterns in the entire sample). Many of these comments referred to how existing patterns conflicted with an innovation, such as “if I had a car, I would buy one”, “I will wait for it to be integrated into the mobile phone”, and “as a student, you are not really a fanatical ironer”. Essentially, consumers seemed to be unwilling to break with their existing routines to use an innovation.

Rejection. Moving to rejection, findings from the three groups which concentrated on this type of resistance indicate that a number of key characteristics can result in outright rejection of an innovation rather than postponement. All focus groups agreed that ‘rejection’ referred to *the active decision to not at all take up an innovation* which had been introduced to market. Like postponement, economic risk and conflict with existing usage patterns played a prominent role in consumers’ decision to reject an innovation. Comments here were similar to those for postponement above, with typical comments relating to economic risk being “you must buy expensive throw-away mops to use it”, while conflicts with existing usage patterns were exemplified by comments such as “when I need the internet, I use my laptop at home” Thus, it can be seen that there were overlaps with the kinds of opinions raised in the focus groups regarding postponement.

It seems that the difference between the postponement of innovation adoption, and the complete rejection of it, lies in the additional factors which were raised by the respondents in these groups. The level of risk was a key factor. Economic risk has already been mentioned, but rejection was distinguished from postponement by the prominence of other types of risk in the consumers’ mind. Of major importance was functional risk. Over half the quotes concerning risk referred to functional risk, and typical comments about various innovations were; “[it’s] quasi-cleaning”, and “the jam tastes like plastic!” Consumers thus appear to reject innovations which they feel just do not work the way they should. Fewer comments were evident concerning the other types of risk, but it is of particular note that social risks appear to be a strong antecedent to rejection. While only a small percentage of all comments in the 8 groups concerned social risks, 48% of them occurred in the rejection groups. The comments regarding social risk were also very evocative, such as “it’s a little bit weird to order” and “if I did decide to use it, I would do it in a corner where nobody could see me”.

Similarly, the perceived image of the innovation was a commonly-discussed antecedent to rejection, with 26% of quotes referring to it. These quotes as expected referred in general to negative extrinsic cues such as “reminds me of ugly mobile phones”, and “everybody has one, it is not special anymore”. Furthermore, many of these comments referred implicitly to negative stereotypes such as; “only for kids”, “home cleaning products are just not cool”, and “in your unconscious, it has to do with something you do on the toilet each day”. Cues related to the product’s origins were also common, such as “it is just not a producer that should sell bread”, and “it should not be in a bottle”.

Opposition. Opposition – the strongest form of resistance – was agreed upon in the focus groups to refer to *actual active behavior directed in some way towards opposing the introduction of an innovation*. Such behaviors ranged from complaint letters, negative word of mouth, online activities, through to taking protest action against the introduction of a product (such as genetically-modified crops). There are some clear differences in the pattern of antecedents to opposition to the other types of resistance. Firstly, none of the antecedents to opposition are shared with postponement, which suggests that even innovations which are considered to be low in economic risk, and to fit well with existing routines, may still be actively opposed by consumers.

Opposition does however share a number of antecedents with rejection. Like rejection, functional and social risk are of importance, and in fact both forms of resistance account for similar proportions of comments here. The content of the comments was broadly similar to those in the rejection groups, such as “it is too big, it takes up a lot of room” for functional risk, and “you would look like a wally” for social risk. Perceived image was also a key antecedent to opposition, seemingly with about the same importance as to rejection. Yet here, comments relating to perceived image seemed a lot stronger than those occurring in the rejection groups, with things such as “[the packaging] is probably meant to mislead children”, and “it doesn’t matter what type it is, Coke makes you fat” being typical. These quotes clearly illustrate the signaling function of the innovation’s image.

Apart from the increased strength of feeling evident in the comments regarding perceived image, the difference between simply rejecting and actively opposing an innovation may be driven by two main factors which are present in addition to those previously mentioned. Firstly is the level of physical risk which the consumer feels is inherent to the innovation. While physical risk was mentioned very infrequently in general, the three groups focused on opposition contained almost every occasion of it being mentioned. Participants were also very evocative in their comments, such as “Dangerous! If you get in an accident on the highway with it, you are dead”, “I always think there is mold and little pieces in it”, and “this thing does not protect your eyes”. Second and more commonly mentioned was a conflict with the existing traditions and norms of society. Comments regarding this were exemplified by such quotes as; “Dutch people prefer to pay with coins”, “vegetables do not belong in a bottle” and “milk is milk and nothing else”. Perhaps the most resonant example of this antecedent is the comment by one consumer that “I am against it because of my principles”.

5. Discussion and implications

The conceptualization presented in this study has aspects of a ‘hierarchical’ pattern, as the collection of antecedents is different in nature for each form of resistance. As such our findings support prior conceptualizations of resistance, and provide an integrative structure to the rather piecemeal approach of prior research on resistance. In particular, [Fournier \(1998\)](#) proposed a resistance ‘continuum’, leading from avoidance to active ‘rebellion’ – although this model appears to focus more on resistance to consumer society as a whole than to individual innovations. [Bagozzi and Lee \(1999\)](#) also seem to classify resistance according to its active or passive nature. The resistance model proposed herein has the function of integrating and clarifying aspects of prior conceptualizations. In particular, the model could be considered to run from less intense/active forms of resistance (postponement) to more intense/active (opposition). In this way, the model is primarily a conceptual tool to structure how consumers think about resistance, not a process model where consumers are considered to ‘move through’ the various forms of resistance.

With regard to the drivers some interesting conclusions can be drawn. While the drivers differ for the various resistance forms, there are some general observations that can be made. Throughout the various types of resistance, risk plays an important role. This implies that risk reduction strategies will play a key role in diminishing consumer resistance toward innovations. Interestingly, a common consumer risk reduction strategy for consumers is the pursuit of information to increase knowledge about these risks and their solutions ([Dowling & Staelin, 1994](#); [Locander & Hermann, 1979](#)). Previous resistance research (e.g., [Herbig & Kramer, 1994](#)) has cautioned companies about elaborate informational campaigns though, due to the discovery of information overload as an important influence on resistance. However, our results indicate that information overload may not be a relevant factor for any of the resistance types. This could be explained by the possibility that the young sample we studied used more new media channels to gather information for themselves, rather than passively accepting it from companies, as may have been the case in previous research. This suggests that, rather than pushing information about new innovations towards the consumer, companies should simply make sure the necessary information is available to the consumer at the moment it is requested or needed, and aid proactive consumers in acquiring the relevant information ([Murray, 1991](#)). The information provided should be tailored to pre-empt consumers’ concerns about the issues addressed in this study in order to overcome consumers’ resistance. For example, new media can be particularly helpful in providing demonstrations of how new products work in virtual environments, illustrating how products can be incorporated in existing habits and living situations.

Additionally, the results suggest that scholars and practitioners should be careful about the simplistic conclusion that decreasing resistance calls for similar approaches to those used in increasing adoption. Innovation adoption research generally focuses on emphasizing benefits of the innovation. With resistance, consumers appear to focus on the adverse consequences as essential factors in their consumer decision making. All the factors are stated as unfavorable attributes of the innovation. [Mizerski \(1982\)](#) finds that such unfavorable attributes have a far stronger impact than favorable. Strategies to diminish this impact should be carefully contemplated, as resistance cannot simply be offset by offering additional product

benefits (Fortin & Renton, 2003). Rather than simply maximizing expected gain, companies should also strategize to minimize expected losses (Peter & Tarpey, 1975). Additionally, the varying importance of the drivers for the different resistance types suggests that companies should develop specific approaches to deal with each particular type of resistance. Each of these implications is discussed below.

5.1. Strategic implications: Postponement

Concerning postponement, economic risk and usage patterns are the main drivers. This is in line with Szmigin and Foxall (1998) who state that postponement, the weakest form of resistance, is often driven by situational barriers that can be temporary in nature. Companies should consider the implications of this finding carefully, as many companies apply price-skimming strategies when introducing innovations, to benefit from their (temporary) monopolistic position. However, this seems to be an ill-advised strategy, as economic risk is one of the major drivers for postponement. Such strategies may cause consumers to adopt at a later stage, which does not only imply individual resistance, but might also create loss of the contagion effects necessary for successful diffusion (van den Bulte & Stremersch, 2004).

Conflicts with existing usage patterns may cause consumers to postpone their innovation decision. However, often such usage patterns develop over time without conscious reflection about how effective these habits still are (Wansink & Ray, 1996). Therefore, it could be beneficial to communicate to consumers how these innovations in fact do fit within their current lifestyle. One way is to design marketing communications that illustrate before and after situations. For example, in recent times Toyota has focused much of its marketing communications on showing how the Prius is still able to deliver a driving experience consistent with current usage habits (e.g., ability to cover long distances without refueling). It may also be beneficial to bundle innovations with products that are already part of consumers' usage patterns (Harris & Blair, 2006). Such marketing communications aim to illustrate an innovation's fit with current behaviors, and help in diminishing consumers' risk perceptions of innovation (Reinders, Dabholkar, & Frambach, 2008). Of course, companies must be careful with such strategies, as Microsoft found out to their cost with their bundling of Internet Explorer with Windows in the 1990s.

5.2. Strategic implications: Rejection

As the number and variety of risk dimensions increases, consumers appear to be more likely to outright reject the innovation, rather than postpone adoption. More specifically, in addition to economic risk, functional and social risks are important drivers of rejection. Perceived image also plays a part in rejection. Specifically, image serves a signaling function to make up for a lack of knowledge; the image is a set of associations related to the innovation, which in the case of resistance serves as a negative extrinsic cue. While it can be beneficial to counter-attack these negative associations with positive external cues (Shimp & Bearden, 1982), this is not always sufficient to offset consumers' negative perceptions. Moreover, positive signals offered by the innovation literature such as word-of-mouth (e.g., Bansal & Voyer, 2000), while highly effective, are difficult to induce by the company, especially when the general level of rejection towards the innovation is high (Midgley & Dowling, 1993). In order to reduce risk, consumers often engage in information-seeking activities (Dholakia, 2001; Locander & Hermann, 1979). Companies can aid consumers in these risk-handling activities in various ways such as extensive labeling information, or increasing the traceability of certain ingredients/components of the innovation (Yeung & Morris, 2001). Concerning functional risk, warranties and quality assurances are often mentioned as an important tool to reduce risk perceptions (Shimp & Bearden, 1982; Yeung & Morris, 2001). Social risk perhaps implies that educating the consumer's environment (rather than the actual consumer) is most important. Diminishing social risk can be accomplished by increasing consumer confidence, which might prove to be a difficult task, or by taking a more peripheral route and changing the perceptions of the environment. Eliciting endorsements and testimonials of celebrities is a commonly suggested strategy in this regard (Roselius, 1971; Yeung & Morris, 2001).

5.3. Strategic implications: Opposition

Opposition seems to be driven by factors strongly embedded in the consumers' personal and societal environment. While the results were fairly consistent throughout the product categories, such factors are more likely to occur in radical than incremental innovations (Danneels, 2004). Conflicts with usage patterns and perceived image are still relevant, and in addition to social and functional risk, physical risk comes into play. It is especially striking that economic risk is no longer a significant motivational factor. This suggests that monetary incentives are not suitable to prevent opposition. Thus, the general contention advanced by innovation research that lower price increases adoption likelihood (e.g., Liao & Cheung, 2001), does not transfer to this particular resistance form. This notion is consistent with the finding that traditions and norms drive only this resistance type. Additionally, it provides support for the earlier conceptual delineation of Rogers' (2003) compatibility construct. An issue that companies should consider in this regard is that it might be extremely difficult to change a societal context, and indeed is sometimes impossible. Consequently, companies should consider investigating the flexibility of the innovation, even after introduction (Ram & Sheth, 1989). For example, while instant cake-mix formulas are perfectly acceptable in today's kitchen, Betty Crocker's early introduction in the 1950s of instant mixes was strongly opposed by traditional housewives. This type of product was not considered 'genuine cooking' according to society's standards at that time. However, Betty Crocker famously modified the product formula, requiring housewives simply to crack an egg into the mix. This

product adaptation made the product a big success, as it appealed more to the traditional cooking experience and gave the users the sense that they were providing their families with nutritious food as was expected of them.

With regard to physical risk, it is important to note that this type of risk is probably most difficult to assess beforehand (especially if the potential damage is long-term). Consequently, consumers are strongly inclined to exhibit avoidance behavior with regard to this type of risk (Yeung & Morris, 2001). While innovation literature has often offered word-of-mouth as a successful way to diminish risk perceptions of consumers (e.g., Midgley & Dowling, 1993), research indicates that this is not beneficial in the case of expected physical harm (Mitchell & Greatorex, 1990; Roselius, 1971). Consumers ascribe the expertise necessary to evaluate this type of risk only to experts and independent sources (Becker, 2000; Grabner-Kraeuter, 2002). Therefore, testing of innovations by independent institutes (e.g., by government, or independent standards agencies) is far more effective (Roselius, 1971; Yeung & Morris, 2001).

6. Limitations and directions for future research

As with any research approach, focus groups are not without limitations (Frey & Fontana, 1993; Greenbaum, 1997). These limitations are closely related to the interviewing process and the generalizability of the findings (Crabtree, Yanoshik, Miller, & O'Connor, 1993; Greenbaum, 1997). As far as the process is concerned, group interaction might lead to conformity with the prevailing opinions in the group and this might even be compounded by the presence of a number of dominant participants. As a result, some participants might not be willing or able to share their views, or may engage in 'impression management'. We detailed the strategies we used to minimize the chance of such issues earlier, yet the possibility must still be taken into account when interpreting the findings. Focus groups necessarily consist of a small, non-representative sample of the larger population and as such researchers must be cautious when generalizing these findings (Greenbaum, 1997). In this particular case the respondents were relatively young and well educated. However, research (e.g., Meuter, Bitner, Ostrom, & Brown, 2005) has stipulated that such socio-demographic characteristics are not particularly effective in explaining consumer decisions with regard to innovations. Even so, future research looking at different socio-demographic samples will likely prove fruitful in this regard.

The research presented here provides a solid foundation for future work regarding the resistance to innovation. There are a number of important avenues where further research efforts should be directed. The objective of our work was to determine a joint framework that recognizes the different forces driving the various forms of resistance. Nevertheless, in doing so we have devoted less attention to more complex interactive relationships between the antecedent factors in our framework. While in our data there was no evidence of such interactions, further research with a specific focus on such relationships could be very insightful. For example, past research has indeed suggested relationships between various types of risk (e.g., Campbell & Goodstein, 2001). Hence, more detailed insights into these relationships, trade-offs, and the possible thresholds that consumers hold in that regard, could be very useful in understanding how to overcome consumer resistance.

While the current findings suggest key general antecedents to the different forms of resistance, there are a number of other factors which need investigation. For example, while a range of product types was discussed, further research should investigate whether our framework holds for a wider variety of products. More specifically, while the results were fairly consistent throughout the different categories, only product, rather than service, innovations were discussed. Several researchers have pointed out that service innovations need to be investigated separately due to their unique characteristics (Hennig-Thurau, Walsh, & Wruck, 2001; Zeithaml, Parasuraman, & Berry, 1985). Additionally, one wonders about the effects of the product type with regard to the level of radicalness. It may be the case that radical innovations (or what have been called 'really new products' or RNPs) face more difficulties than incremental innovations, as they are more likely to general the resistance drivers discussed in this study.

Furthermore, our study has focused on cognitive processes, and to a lesser extent on the role of sociological and emotional elements in explaining resistance. Our results already indicate that social risk is a key factor, but the various dimensions of sociological effects have been left unexplored. For example, recent literature about individual versus group behavior illustrates that not only innovators, but also consumers that resist innovations, use their behavior as a strategy to stand out from the group (Berger & Heath, 2007). Such consumer behaviors are not considered in the current study and provide an avenue of research in its own right.

In addition, understanding emotional reactions toward product innovations might further develop our insights on resistance. Duhachek and Oakley (2007) illustrate that one way of coping with negative emotions toward products is to ignore them, while other emotions trigger behaviors that might aid in overcoming resistance. When and how such emotions surface and how they interact with the antecedents we uncovered deserves further attention. Nevertheless, while additional research is necessary in order to be more conclusive with regard to the issues presented above, the model presented here provides an important step forwards in the conceptualization of resistance as a key component of consumer psychology which warrants detailed investigation in its own right.

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References

- Altheide, D. L. (1996). *Qualitative media analysis*. Thousand Oaks, CA: Sage Publications.
- Bagozzi, R. P., & Lee, K.-H. (1999). Consumer resistance to, and acceptance of, innovations. *Advances in Consumer Research*, 26(1), 218–225.
- Bansal, H. S., & Voyer, P. A. (2000). Word-of-mouth processes within a services purchase decision context. *Journal of Service Research*, 3(2), 166–177.
- Bearden, W. O., & Shimp, T. A. (1982). The use of extrinsic cues to facilitate product adoption. *Journal of Marketing Research*, 19(2), 229–239.
- Becker, T. (2000). Consumer perception of fresh meat quality: A framework for analysis. *British Food Journal*, 102(3), 158–176.
- Berger, J., & Heath, C. (2007). Where consumers diverge from others: Identity signaling and product domains. *Journal of Consumer Research*, 34(August), 121–134.
- Bredahl, L. (2001). Determinants of consumer attitudes and purchase intentions with regard to genetically modified foods – Results of a cross-national survey. *Journal of Consumer Policy*, 24, 23–61.
- Bryman, A. (2004). *Social research methods* (2nd ed.). Oxford: Oxford University Press.
- Campbell, M. C., & Goodstein, R. C. (2001). The moderating effect of perceived risk on consumers' evaluations of product incongruity: Preference for the norm. *Journal of Consumer Research*, 28, 439–449.
- Chau, P. Y. K. (1996). An empirical assessment of a modified technology acceptance model. *Journal of Management Information Systems*, 13(2), 185–204.
- Cho, I., & Kim, Y. (2001–2002). Critical factors for assimilation of object-oriented programming languages. *Journal of Management Information Systems*, 18(3), 125–156.
- Coetsee, L. (1999). From resistance to commitment. *Public Administration Quarterly*, 23(2), 204–222.
- Crabtree, B. F., Yanoshik, M. K., Miller, W. L., & O'Connor, P. J. (1993). Selecting individual or group interviews. In D. L. Morgan (Ed.), *Successful focus groups* (pp. 137–152). Newbury Park: Sage Publications.
- D'Errico, R. A. (2005). *Harris interactive poll finds mixed news for VoIP adoption*. *The Business Review*, March 15, <<http://albany.bizjournals.com/>>.
- Danneels, E. (2003). Tight-loose coupling with customers: The enactment of customer orientation. *Strategic Management Journal*, 24(66), 559–576.
- Danneels, E. (2004). Disruptive technology reconsidered: A critique and research agenda. *Journal of Product Innovation Management*, 21, 246–258.
- Davidson, R. S., & Walley, P. B. (1985). Computer fear and addiction: Analysis, prevention and possible modification. *Journal of Organizational Behavior Management*, 6, 37–51.
- Dekker, W. (2007). *Gouden Kooi dit jaar van de buis*. *Volkskrant*, August 23, <http://www.volkskrant.nl/binnenland/article454703.ece/Gouden_Kooi_dit_jaar_van_de_buis>.
- Dhebar, A. (1996). Speeding high-tech producer, meeting the balking customer. *Sloan Management Review*, 37(2), 37–49.
- Dholakia, U. M. (2001). A motivational process model of product involvement and consumer risk perception. *European Journal of Marketing*, 35(11/12), 1340–1360.
- Dittmar, H., & Drury, J. (2000). Self-image – Is it in the bag? A qualitative comparison between 'ordinary' and 'excessive' consumers. *Journal of Economic Psychology*, 21, 109–142.
- Dowling, G. R., & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *Journal of Consumer Research*, 21(1), 119–135.
- Duhachek, A., & Oakley, J. L. (2007). Mapping the hierarchical structure of coping: Unifying empirical and theoretical perspectives. *Journal of Consumer Psychology*, 17(3), 218–233.
- Fain, D., & Roberts, M. L. (1997). Technology vs. consumer behavior: The battle for the financial services customer. *Journal of Direct Marketing*, 11(1), 44–54.
- Fern, E. E. (2001). *Advanced focus group research*. Thousand Oaks, CA: Sage Publications.
- Fortin, D. R., & Renton, M. S. (2003). Consumer acceptance of genetically modified foods in New Zealand. *British Food Journal*, 105(1/2), 42–58.
- Fournier, S. (1998). Special session summary, consumer resistance. Societal motivations, consumer manifestations, and implications in the marketing domain. *Advances in Consumer Research*, 25, 88–90.
- Foxall, G. R. (1993). The influence of cognitive style on consumers' variety seeking among food innovations. *British Food Journal*, 95, 32–36.
- Foxall, G. R. (1994). Consumer initiators: Both adopters and innovators. In M. J. Kirton (Ed.), *Adopters and innovators* (pp. 236–259). London: Routledge.
- Franzosi, R. (2004). Content analysis. In M. Hardy & A. Bryman (Eds.), *Handbook of data analysis* (pp. 547–565). London: Sage Publications.
- Frey, J. H., & Fontana, A. (1993). The group interview in social research. In D. L. Morgan (Ed.), *Successful focus groups* (pp. 20–34). Newbury Park: Sage Publications.
- Ganiere, P., Chern, W., Hahn, D., & Chiang, F.-S. (2004). Consumer attitudes towards genetically modified foods in emerging markets: The impact of labeling in Taiwan. *International Food and Agribusiness Management Review*, 7(3), 1–20.
- Garcia, R., & Atkin, T. (2002). *Coo-petition for the diffusion of resistant innovations: A case study in the global wine industry*. Institute for Global Innovation Management Working Paper, 05-002 (pp. 1–22).
- Garrett, D. E. (1987). The effectiveness of marketing policy boycotts: Environmental opposition to marketing. *Journal of Marketing*, 51(April), 46–57.
- Gatignon, H., & Robertson, T. S. (1989). Technology diffusion: An empirical test of competitive effects. *Journal of Marketing*, 53(1), 35–49.
- Grabner-Kraeuter, S. (2002). The role of consumers' trust in online-shopping. *Journal of Business Ethics*, 39, 43–50.
- Greenbaum, T. L. (1997). *The handbook for focus group research*. Newbury Park: Sage Publications.
- Greenleaf, E. A., & Lehmann, D. R. (1995). Reasons for substantial delay in consumer decision making. *Journal of Consumer Research*, 22(2), 186–199.
- Haig, M. (2003). *Brand failures*. London, UK: Kogan Page.
- Harris, J., & Blair, E. A. (2006). Consumer preference for product bundles: The role of reduced search costs. *Journal of the Academy of Marketing Science*, 34(4), 506–513.
- Hennig-Thurau, T., Walsh, G., & Wruck, O. (2001). An investigation into the factors determining the success of service innovations – The case of motion pictures. *Academy of Marketing Science Review*, 1(6)<<http://www.amsreview.org/articles/hennig06-2001.pdf>>.
- Herbig, P. A., & Day, R. L. (1992). Customer acceptance. The key to successful introductions of innovations. *Marketing Intelligence & Planning*, 10(1), 4–15.
- Herbig, P. A., & Kramer, H. (1994). The effect of information overload on the innovation choice process: Innovation overload. *Journal of Consumer Marketing*, 11(2), 45–54.
- Herrmann, R. O. (1993). The tactics of consumer resistance. Group action and the marketplace exit. *Advances in Consumer Research*, 20, 130–134.
- Hirschheim, R., & Newman, M. (1988). Information systems and user resistance. theory and practice. *The Computer Journal*, 31(5), 398–408.
- Hirschman, E. C. (1987). Adoption of an incredibly complex innovation: Propositions from a humanistic viewpoint. *Advances in Consumer Research*, 14, 376–377.
- Holbrook, M. B., & O'Shaughnessy, J. (1988). On the scientific status of consumer research and the need for an interpretive approach to studying consumption behaviour. *Journal of Consumer Research*, 15(3), 398–402.
- Hurter, A. P., & Rubenstein, A. H. (1978). Market penetration by new innovations, technological literature. *Technological Forecasting and Social Change*, 197, 221.
- Karahanna, E., Agarwal, R., & Angst, C. M. (2006). Reconceptualizing compatibility beliefs in technology acceptance research. *MIS Quarterly*, 30(4), 781–804.
- Kassarjian, H. H. (1977). Content analysis in consumer research. *Journal of Consumer Research*, 4(June), 8–18.
- Keller, K. L., & Staelin, R. (1987). Effects of quality and quantity of information on decision effectiveness. *Journal of Consumer Research*, 2, 200–213.
- Kleijnen, M. H. P., de Ruyter, K., & Andreassen, T. W. (2005). Image congruence and the adoption of service innovations. *Journal of Service Research*, 7(4), 343–359.
- Kleijnen, M. H. P., de Ruyter, K., & Wetzels, M. G. M. (2004). Consumer adoption of wireless services: Discovering the rules, while playing the game. *Journal of Interactive Marketing*, 18(2), 51–61.
- Kleijnen, M. H. P., de Ruyter, K., & Wetzels, M. G. M. (2007). An assessment of value creation in mobile service delivery and the moderating role of time consciousness. *Journal of Retailing*, 83(1), 33–46.

- Klerck, D., & Sweeney, J. C. (2007). The effect of knowledge types on consumer-perceived risk and adoption of genetically modified foods. *Psychology & Marketing*, 24(2), 171–193.
- Kolbe, R. H., & Burnett, M. S. (1991). Content-analysis research: An examination of applications with directives for improving research reliability and objectivity. *Journal of Consumer Research*, 18(2), 243–250.
- Kozinets, R. V., & Handelman, J. M. (1998). Ensouling consumption: A netnographic of the meaning of boycotting behavior. *Advances in Consumer Research*, 25, 475–480.
- Krueger, R. A. (1988). *Focus groups: A practical guide for applied research*. London: Sage publications.
- Lapointe, L., & Rivard, S. (2005). A multilevel model of resistance to information technology implementation. *MIS Quarterly*, 29(3), 461–491.
- Lee, H. G., & Clark, T. H. (1996–1997). Market process reengineering through electronic market systems: Opportunities and challenges. *Journal of Management Information Systems*, 13(3), 113–137.
- Lennon, S. J., Kim, M., Johnson, K. K. P., Jolly, L. D., Damhorst, M. L., & Jasper, C. R. (2007). A longitudinal look at rural consumer adoption of online shopping. *Psychology & Marketing*, 24(4), 375–401.
- Liao, Z., & Cheung, M. T. (2001). Internet-based e-shopping and consumer attitudes: An empirical study. *Information & Management*, 38, 299–306.
- Lin, C.-H., Hsin-Yu, S., & Sher, P. J. (2007). Integrating technology readiness into technology acceptance. The TRAM model. *Psychology & Marketing*, 24(7), 641–657.
- Locander, W. B., & Hermann, P. W. (1979). The effect of self-confidence and anxiety on information seeking in consumer risk reduction. *Journal of Marketing Research*, 16(May), 268–274.
- Luomala, H. T., & Laaksonen, M. (1999). A qualitative exploration of mood-regulatory self-gift behaviors. *Journal of Economic Psychology*, 20, 147–182.
- Malhotra, N. K. (1984). Reflections on the information overload paradigm in consumer decision making. *Journal of Consumer Research*, 10, 436–437.
- Martinko, M. J., Henry, J. W., & Zmud, R. W. (1996). An attributional explanation of individual resistance to the introduction of information technologies in the workplace. *Behaviour & Information Technology*, 15(5), 313–330.
- Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing*, 26(April), 61–83.
- Midgley, D. F., & Dowling, G. R. (1993). A longitudinal study of product form innovation: The interaction between predispositions and social messages. *Journal of Consumer Research*, 19, 611–625.
- Mitchell, V.-W., & Groatorex, M. (1990). Consumer perceived risk in the UK food market. *British Food Journal*, 92(2), 16–22.
- Mitchell, V.-W., & Papavassiliou, V. (1997). Exploring consumer confusion in the watch market. *Marketing Intelligence & Planning*, 15(4), 164–172.
- Mizerski, R. W. (1982). An attribute explanation of the disproportionate influence of unfavorable information. *Journal of Consumer Research*, 9(December), 301–310.
- Moisio, R. J., & Askegaard, S. (2002). “Fighting Culture” – Mobile phone consumption practices as means of consumer resistance. In T. Ping & R. Zwick (Eds.), *Asia pacific advances in consumer research* (5th ed., pp. 24–29). Valdosta, GA: Association for Consumer Research.
- Molesworth, M., & Suortti, J.-P. (2002). Buying cars online: The adoption of the web for high-involvement, high cost purchases. *Journal of Consumer Behaviour*, 2(2), 155–168.
- Moore, G. A. (2002). *Crossing the chasm: Marketing and selling high-tech products to mainstream consumers*. New York, NY: HarperCollins Publishers.
- Morgan, D. L., & Spanish, M. T. (1985). Social interaction and the cognitive organisation of health-relevant knowledge. *Sociology of Health & Illness*, 7(3), 401–422.
- Murray, K. B. (1991). A test of services marketing theory: Consumer information acquisition activities. *Journal of Marketing*, 55(January), 10–25.
- Nabih, M. I., Bloem, J. G., & Poiesz, T. B. C. (1997). Conceptual issues in the study of innovation adoption behaviour. *Advances in Consumer Research*, 24, 190–196.
- Noussair, C., Robin, S., & Ruffieux, B. (2004). Do consumers really refuse to buy genetically modified food? *Economic Journal*, 114(492), 102–120.
- Oreg, S. (2003). Resistance to change: Developing and individual differences measure. *Journal of Applied Psychology*, 88(4), 680–693.
- Oreg, S. (2006). Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology*, 15(1), 73–101.
- Parasuraman, A. (2000). Technology Readiness Index (TRI): A multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research*, 2(4), 307–320.
- Pavia, T., & Costa, J. A. (1993). The winning number: Consumer perceptions of alpha-numeric brand names. *Journal of Marketing*, 57(July), 85–98.
- Peñaloza, L., & Price, L. L. (1993). Consumer resistance. A conceptual overview. *Advances in Consumer Research*, 20, 123–128.
- Perreault, W. D., Jr., & Leigh, L. E. (1989). Reliability of nominal data based on qualitative judgments. *Journal of Marketing Research*, 26(2), 135–148.
- Peter, J. P., & Tarpey, L. X. Sr. (1975). A comparative analysis of three consumer decision strategies. *Journal of Consumer Research*, 2(1), 29–37.
- Ram, S. (1987). A model of innovation resistance. *Advances in Consumer Research*, 14(1), 208–211.
- Ram, S. (1989). Successful innovation using strategies to reduce consumer resistance. *Journal of Product Innovation Management*, 6(1), 20–34.
- Ram, S., & Sheth, J. N. (1989). Consumer resistance to innovations: The marketing problem and its solutions. *Journal of Consumer Marketing*, 6(2), 5–14.
- Reinders, M. J., Dabholkar, P. A., & Frambach, R. T. (2008). Consequences of forcing consumers to use technology-based self-service. *Journal of Service Research*, 11(2), 107–123.
- Ritson, M., & Dobscha, S. (1999). Marketing heretics: Resistance is/is not futile. *Advances in Consumer Research*, 26, 159.
- Rogers, E. M. (2003). *Diffusion of innovations* (5 ed.). New York: Free press.
- Roselius, T. (1971). Consumer rankings of risk reduction methods. *Journal of Marketing*, 35(January), 56–61.
- Rust, R. T., & Cooil, B. (1994). Reliability measures for qualitative data: Theory and implications. *Journal of Marketing Research*, 31(1), 1–14.
- Saba, A., Rosati, S., & Vassallo, M. (2000). Biotechnology in agriculture: Perceived risk, benefits and attitudes in Italy. *British Food Journal*, 102(2), 114–122.
- Sen, S., Gurhan-Canli, Z., & Morwitz, V. (2001). Withholding consumption: A social dilemma perspective on consumer boycotts. *Journal of Consumer Research*, 28(December), 399–417.
- Sheth, J. N. (1981). Psychology of innovation resistance: The less developed concept in diffusion research. *Research in Marketing*, 4, 273–282.
- Shimp, T. A., & Bearden, W. O. (1982). Warranty and other extrinsic cue effects on consumers' risk perceptions. *Journal of Consumer Research*, 9(1), 38–46.
- Shoemaker, R. W., & Shoaf, F. R. (1975). Behavioural changes in the trail of new products. *Journal of Consumer Research*, 104, 109.
- Szmigin, I., & Foxall, G. (1998). Three forms of innovation resistance: The case of retail payment methods. *Technovation*, 18(6/7), 459–468.
- Taylor, S., & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International Journal of Research in Marketing*, 12(2), 137–155.
- Thiesse, F. (2007). *RFID, privacy and the perception of risk: A strategic framework*. Auto-ID Labs White Paper, WP-BIZAPP-031 (pp. 1–24).
- Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management*, 29(1), 28–45.
- van den Bulte, C., & Stremersch, S. (2004). Social contagion and income heterogeneity in new product diffusion: A meta-analytic test. *Marketing Science*, 23(4), 530–544.
- Wansink, B., & Ray, M. L. (1996). Advertising strategies to increase usage frequency. *Journal of Marketing*, 60(January), 31–46.
- Woodside, A. G., & Biemans, W. G. (2005). Modeling innovation, manufacturing, diffusion and adoption/rejection processes. *Journal of Business & Industrial Marketing*, 20(7), 380–393.
- Yeung, R. M. W., & Morris, J. (2001). Food safety risk: Consumer perception and purchase behaviour. *British Food Journal*, 103(3), 170–186.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and strategies in services marketing. *Journal of Marketing*, 49(Spring), 33–46.