ONLINE CONSUMER TRUST IN E-COMMERCE

LA CONFIANCE DES CONSOMMATEURS EN LIGNE DANS L’E-COMMERCE

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RESUME

Avec la croissance des ventes sur internet, de nouvelles opportunités commerciales se sont ouvertes dans le domaine des services de réseaux sociaux et commerce électronique. Il est important pour les vendeurs en ligne de comprendre l’utilité de la confiance en ligne, et son influence sur les consommateurs.

Dans cet article, nous présentons une évaluation des recherches sur la confiance des consommateurs en ligne dans le commerce électronique. Ainsi, dans un premier temps les spécificités de la confiance électronique, et dans un deuxième temps, la confiance dans le contexte du commerce électronique et leurs déterminants seront exposée. Enfin, des éléments de réflexion sur sa dynamique seront proposés.

MOTS CLES : Confiance, media social, e-commerce, commerce social.

ABSTRACT

With the growth of internet sales, new business opportunities have opened up in the field of social network services and e-commerce. It’s important for online sellers to understand the utility of online trust and its influence on consumers.

In this article, we present an assessment of research on online consumer trust in e-commerce. Thus, as a first step, the specifics of online trust, and secondly, trust in the context of e-commerce and its determinants will be outlined. Finally, elements for reflection on its dynamics will be proposed.

KEYWORDS: Trust, social media, e-commerce, social commerce.
INTRODUCTION

Recently, the work on e-trust has multiplied. Given the exponential development of research in this field, a first inventory is necessary. The concept of online trust is at the crossroads of several disciplinary fields. The marketing literature being relatively poor on the subject, it should be supplemented and enriched by work in other fields, particularly in the field of e-commerce, (Corbitt, Thanasankit and Yi, 2003, Lee and Turban, 2001), management (Gefen and Straub, 2004, Stewart, 2003) and information systems (Papadopoulou, Kanellis and Martakos, 2003; Bhattacherjee, 2002). We note at the outset that we are only interested in research that has studied trust in the context of consumer e-commerce.

The aim of this article is to propose a review of the literature on the subject, with a double objective.

On the one hand, it aims to give a first idea of the specificities of electronic trust, its definitions, dimensions and determinants. This initial review will provide an opportunity to better define the concept and highlight the relevant issues to be explored.

On the other hand, it should be noted that despite the multiplication of research on electronic trust, little interest has been given to understanding its dynamics.

This synthesis revolves around several axes. First of all, we will return to the particularities of trust in the context of online transactions. Then, the question of the definition of the concept and its dimensionality will be addressed. Thirdly, a typology of the determinants of electronic trust will be presented. In the last part, we will propose some elements for reflection on its dynamics.

I- SOME SPECIFICITIES OF ELECTRONIC TRUST

1. A RISKY CONTEXT AND INCREASED VULNERABILITY

While some sites offer payment on delivery, for the majority, payment is made at the time of the order. The consumer is then a little lost in his brands, as he is used to acquiring the product immediately after payment. Will the product I paid for be delivered? Will the delivered
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product correspond to the one I ordered? .... These are examples of questions that any buyer on the Internet may ask himself. Because he becomes dependent on the merchant and has no control over his actions, the consumer puts himself in a vulnerable situation.

Intimately linked, the notions of vulnerability and risk go hand in hand. On the Internet, if the consumer is so vulnerable, it is because he is confronted with a risky context. Two types of risk are inherent in electronic transactions: behavioural risk and environmental risk (Pavlou, 2003).

Behavioural risk refers to the subjective probability that a given trader will behave in an opportunistic manner. It is a risk associated with a specific Internet vendor. Several examples may illustrate this: failure to deliver the product ordered, non-compliance between the promised and actual quality of the offer, sale of private data to unauthorised third parties, ...

In addition to the behavioural risk, Internet users are exposed to a risk directly linked to the Internet: the environmental risk. This is a risk that is inherent to the technology used and is beyond the control of the two parties to the exchange. In fact, despite the efforts made to ensure security, not all information exchanged on the Internet can be completely safe from malicious intrusion by "hackers". Hackers, are highly skilled people who illegally break into computer systems. Their aim is to access the "customer databases" of companies (banks in particular) with a view to the fraudulent use of certain information (credit card numbers, etc.).

Through the use of state-of-the-art encryption procedures and security software, retailers can reduce environmental risk, but certainly not eliminate it. Indeed, on the Net, despite all the security efforts, it is hardly possible to protect oneself safely against any attempt at fraud.

The coexistence of these two types of risk makes the Internet a risky way to buy. As the risk is quite high, the consumer is more vulnerable than ever and the need for trust is greater.

2. PHYSICAL ABSENCE OF A SALESPERSON

One of the peculiarities of buying on the Internet is the physical absence of a seller. Thus, an interpersonal relationship is replaced by human-machine interaction. From the consumer's point of view, the need for a salesperson when making a purchasing decision can be
expressed, in general, through three dimensions: the need to ask a salesperson for information (utilitarian/functional dimension), the need to come into direct contact with a contact person (relational/social dimension) or the need to ask for advice (reinsurance dimension).

On the Internet, it is probably the latter dimension that is the most critical. In the absence of expertise, consumers often feel the need to seek help from an advisor (buying a computer, digital camera, etc.). An expert and competent salesperson generally manages to inspire consumer trust. To alleviate this problem - and recognising the importance of the salesperson’s role (Urban, Sultan & Qualls, 1999) have proposed the creation of a virtual adviser. A graphical interface to visualise the adviser is used to interact with the consumer. In their research, they show that the presence of these "virtual sellers" has a positive impact on trust in the site.

These characteristics make the issue of e-trust all the more important and promote a better understanding of the factors underlying its development. We will return later to the determinants of online trust, but for the moment we focus on its definition and dimensionality.

II - TRUST IN THE CONTEXT OF E-COMMERCE: DEFINITIONS AND DIMENSIONALITY

Defined as "a belief that allows consumers to accept the vulnerability of a merchant on the Internet" (Pavlou, 2003) or "the willingness of the consumer to trust the seller and act even if it makes him vulnerable" (Tractinsky & Jarvenpaa, 1999), electronic trust does not appear to be fundamentally different from traditional trust. It should be noted, however, that reference to the notion of vulnerability is more recurrent in e-commerce research. Indeed, if trust in the context of e-commerce is even more critical, it is partly due to the greater vulnerability of the consumer.

The notion of vulnerability has also been frequently referred to in traditional work on trust (Davis, Mayer and Schoorman, 1995). Some authors even go so far as to argue that 'without vulnerability, trust is not necessary' (Moorman, 1992; 1993). Vulnerability refers to the
possibility that one of the parties to the exchange will be harmed. It places the consumer in a situation of fragility that could be exploited by the other party to the exchange. As soon as vulnerability allows the possibility of betrayal, trust is needed. On the Internet, the consumer is more vulnerable than ever. The effects inherent in the context (in particular the perceived risk) expose the Internet user to more fraud and, as a corollary, raise the question of trust more acutely.

In addition, a review of the dimension of trust in e-commerce shows that some literature has used one-dimensional constructs (Tractinsky & Jarvenpaa, 1999) while others advocate a multidimensional design (Mcknight, 2002). However, while researchers are not always unanimous on the dimensions of trust, most agree that it is a multidimensional construct. The dimensions selected by the research echo those identified in the traditional literature on trust. The most frequently cited are competence (the ability of the Internet merchant to perform the task at hand), integrity (the reliability of promises made by the merchant) and benevolence (concern for the consumer's well-being).

The following table provides an overview of work on trust in e-commerce. It aims to identify the level of analysis studied (specific trader, purchase on the Internet in general, etc.), the reference definition adopted and the dimensions retained where appropriate.
### Table 1: Definitions and Dimensions of Online Trust

<table>
<thead>
<tr>
<th>Authors/Reference Literature</th>
<th>Level of Analysis</th>
<th>Definition of Trust Adopted</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gefen et Straub (2004) (Management)</td>
<td>Trust in a merchant</td>
<td>Review of the different definitions of trust but no reference definition</td>
<td>Integrity, Predictability, Competence, Benevolence</td>
</tr>
<tr>
<td>Corbitt, Thanasankit et Yi (2003) (E-commerce)</td>
<td>Trust in e-commerce in general</td>
<td>The authors adopt the definition of trust proposed by Hosmer (1995): &quot;an expectation that other parties will behave in accordance with their commitments, negotiate honestly and not take advantage of the situation even when the opportunity arises&quot;.</td>
<td>Competence, Predictability, Goodwill</td>
</tr>
<tr>
<td>Stewart (2003) (Organisation)</td>
<td>Trust in an unknown merchant site</td>
<td>The author focuses on the trust transfer mechanism as a means of establishing initial trust to an unknown entity but does not give a reference definition.</td>
<td>One-dimensional construction</td>
</tr>
<tr>
<td>Source</td>
<td>Definition</td>
<td>Dimension</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td></td>
</tr>
<tr>
<td>Pavlou (2003) (E-commerce)</td>
<td>&quot;A belief that allows consumers to accept vulnerability to an Internet vendor after considering the characteristics of that vendor&quot;.</td>
<td>One-dimensional construction</td>
<td></td>
</tr>
<tr>
<td>Suh et Han (2003) (Commerce électronique)</td>
<td>&quot;The belief that one can rely on the promises made by others ... »</td>
<td>Competence, Benevolence, Integrity</td>
<td></td>
</tr>
<tr>
<td>McKnight, Choudhury and Kacmar (2002) (Information system)</td>
<td>The authors introduce the concept of &quot;initial trust&quot;. It is trust in an unfamiliar salesperson, a salesperson with whom the consumer has no experience.</td>
<td>Trust in a seller is a two-sided construct: Confident beliefs, Confident intentions</td>
<td></td>
</tr>
<tr>
<td>Yoon (2002) (Marketing)</td>
<td>Review of a few definitions proposed in the literature but no reference definition.</td>
<td>Built one dimensional</td>
<td></td>
</tr>
<tr>
<td>Belanger, Hiller and Smith (2002) (Information System)</td>
<td>« Perception of trust in the electronic marketer’s reliability and integrity».</td>
<td>Built one dimensional</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Trust in E-commerce</th>
<th>Definition</th>
<th>Dimensionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head et Hassanein (2002)</td>
<td>Trust in e-commerce</td>
<td>The belief or expectation that the seller's statements and promises are reliable and that the seller will not take advantage of the consumer's vulnerability</td>
<td>The question of the dimensionality of trust was not addressed.</td>
</tr>
<tr>
<td>Gefen (2000) (Management)</td>
<td>Trust in a merchant</td>
<td>Beliefs about the future actions of others, &quot;Trust is established when individuals or organizations behave in congruence with our own (favourable) expectations&quot;.</td>
<td>Built one dimensional</td>
</tr>
<tr>
<td>Jarvenpaa et Tractinsky (1999) (Marketing)</td>
<td>Trust in a virtual point of sale</td>
<td>The consumer's willingness to rely on the seller and to take action even if it makes him/her vulnerable in relation to the seller.</td>
<td>Built one dimensional</td>
</tr>
</tbody>
</table>

### III- DETERMINANTS OF ONLINE TRUST

In light of the work done on trust in the context of e-commerce, several explanatory factors have been identified. We propose to classify them into four categories: merchant variables, site variables, consumer variables and context variables. In what follows, we will limit ourselves to analyzing some of these determinants. The choice of factors retained is dictated by the recurrent reference to these variables in the literature. A more complete review of the determinants of trust identified in the literature is also proposed.
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1. WEBSITE-RELATED VARIABLES

1.1. PERCEIVED QUALITY OF THE WEBSITE:

The relationship between the concepts of site quality and consumer trust has been demonstrated by certain researchers such as (Mcknight, 2002) or (Corbitt, 2003). Although the authors seem to agree on the positive link between the two constructions, a detailed examination of the evidence shows that the notion of quality is not understood in the same way. Indeed, in the literature on online trust, different meanings are presented. For some, quality refers to ease of navigation; for others, it is more focused on information. A third approach uses measures that incorporate both quality of navigation and quality of information (Belanger, 2002).

Nevertheless, in research, the quality of a site seems to be an important factor of trust. It is a hinge variable that could influence the consumer’s judgment of the merchant. Indeed, the site is a mediator between the consumer and the company which sells its products on Internet. For the little known merchants, the site is the first impression that the consumer will have of the company. Insofar as a certain image is conveyed by the site (Crobbitt, 2003), it is important that the site reflect the seriousness and professionalism of the merchant. Thus, just as a salesperson must have a neat physical appearance, a website must also have a presentation quality that inspires trust.

1.2. SECURITY AND PRIVACY

Security is, to say the least, a fundamental and crucial issue in the context of electronic transactions. Its impact on trust has been highlighted by several researchers (Yoon, 2002, Suh and Han, 2003) & (Corbitt, 2003). On the Internet, any information exchanged can be intercepted by unauthorised third parties. The fraudulent use of credit card numbers remains the main fear of consumers. To reduce the risk of data privacy breaches and to protect themselves against the phenomenon of hacking, merchants use advanced technologies (Secure Socket Layer, Secure Electronic Transactions, protocols,…). The primary function of
encryption is to make data unintelligible when it is transmitted over the Internet. Only the recipient of the message will be able to decode it.

Security is a necessary but not sufficient condition for building trust. Indeed, as (Shankar, 2003) point out, today "trust goes far beyond security and privacy". More clearly, an unsecured site will generate consumer distrust from the outset, whereas the fact that a site is secure will have only a marginal impact on trust. We can therefore clearly see the asymmetry of the effect of this variable. Its presence only marginally affects trust, whereas its absence can be a deterrent to purchase.

Today, almost all sites opt for software to secure data transmitted over the Internet, making security a "basic element" necessary for any transaction. A more substantial impact on trust is to be sought at the level of "key elements" or "plus elements" in the sense of LLosa (1997).

Many consumers start from the premise that the site must be secure (a sine qua non condition) and then look for factors that show that the merchant is trustworthy.

Suh and Han (2003) identify five mechanisms for ensuring security on the internet:

- Authentication : Verification of the identity of the parties involved in the exchange.
- Non-repudiation : None of the parties can retract after having proceeded with the exchange.
- Confidentiality : It guarantees that access to the data is only accessible to the parties involved in the exchange. This is a measure against illegal intrusion by third parties.
- Protection of privacy : The personal data collected will be protected against unauthorised communication.
- Integrity of information : It guarantees that, during transmission, the data is unalterable. They cannot be created, deleted or modified.
2. MERCHANT VARIABLES

2.1. PERCEIVED REPUTATION OF THE MERCHANT:

Along with traditional work on trust, reputation is an important determinant of online trust (Fung and Lee, 1999); (Tractinsky & Jarvenpaa, 1999); (Mcknight, Yoon, 2002). A good reputation is a guarantee of reassurance for the consumer. Indeed, merchants refrain from acting opportunistically to preserve their "reputation" capital. Reputation refers to the history, the past of the company. It is in this sense that it guarantees a certain predictability of future behavior.

Mcknight, (2002), point out that reputation is particularly important in the initial phase of trust development. This is because consumers do not have personal experience with the e-commerce trader and therefore base their judgements on third party assessments. Thus, for example, if a friend or relative has already had a positive experience with the trader, the consumer's "initial" trust is immediately affected. Similarly, the image conveyed by the media (television programmes, specialist magazines, etc.) inevitably contributes to weakening, strengthening or building trust in Internet sellers.

2.2. SATISFACTION OF PAST EXPERIENCES WITH THE MERCHANT:

Following the example of work on traditional trust (Ganesan, 1994), satisfaction following past interactions with the trader is an explanatory factor of trust (Pavlou, 2003). Like reputation, it refers to a past, a history. On the other hand, it implies an evaluation of a personal experience made by the consumer (and not by third parties) on a given transaction or set of transactions. As an important determinant of trust, satisfaction must be treated with caution. Indeed, a satisfied consumer is likely to renew his trust in the site. However, the slightest dissatisfaction can be fatal for the merchant.
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3. CONSUMER-RELATED VARIABLES

3.1. PROPENSITY TO TRUST:

The propensity to trust or willingness to trust has been studied in particular in psychology (Rotter, 1967). Curiously, few marketing studies have included it in their models. However, the work on e-commerce indicates a renewed interest in this variable (Lee and Turban, 2001); (Stewart, 2003), (Mcknight, Choudhury and Kacmar, 2002). It is seen as a stable personality trait that manifests itself through different situations. It distinguishes individuals who are generally "confident" and/or "suspicious". Individuals with a stable tendency to be 'confident' assume that 'others' are trustworthy until proven otherwise.

3.2. FAMILIARITY WITH THE WEBSITE / WITH THE INTERNET

Familiarity refers to the number of prior experiences the consumer has accumulated (Alba and Hutchinson, 1987). It consists of understanding a present state in order to establish expectations about a future state (Gefen, 2000). Some authors even go so far as to say that familiarity is a prerequisite for trust (Luhmann, 1979). Familiarity, based on an entire history, ensures a certain predictability of behaviour. Once this predictability is established, trust can find fertile ground for development. Familiarity therefore promotes the formation of trust. The significant positive impact of familiarity (with the site and/or the Internet) on trust has been demonstrated in the literature by several authors (Gefen, 2000) & (Bhattacherjee, 2002) (Gefen & Straub, 2004); (Corbitt, 2003).

4. CONTEXT VARIABLE: PERCEIVED RISK

The concept of risk refers to uncertainty about the potential negative consequences of a purchasing decision (Bauer, 1960). In the context of an Internet purchase, three dimensions of perceived risk become particularly preponderant: financial risk (inherent in payment via the Internet), private risk and performance risk. Financial risk refers to the possible fraudulent use of bank data. Private risk refers to the fact that personal information given on a commercial site may be used for other purposes (Cases, 2002). Performance risk refers to the actual
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quality of the product. Indeed, in a virtual context, the product, the object of the exchange, becomes elusive, not palpable. In order to make his decision, the consumer will have to be satisfied with a few pictorial representations of the product and rely on the description presented on the site.

IV/ ONLINE TRUST: TOWARDS A DYNAMIC UNDERSTANDING

A review of research on online trust shows that little work has been done to understand the phenomenon in a dynamic way (Papadopoulou, Kanellis and Martakos, 2004). Yet trust appears to be a concept that evolves over time: trust is built, strengthened, maintained or deteriorated.

1. THE TRUST BUILDING PHASES:

Recognizing that trust is a dynamic process, the question then arises of the different phases of its development. A report by Cheskin Research (a consulting firm frequently cited in academic research), shows that online trust generally goes through three phases: building, confirming and maintaining. The work of Head and Hassanein (2002) is one of the few studies to propose a holistic model that takes into account the dynamics of the concept. They identify four phases in the development of online trust: chaos, building, reinforcement and maintenance. The characteristics of each of these phases are discussed below. Throughout this process, trust can be betrayed.
2. NATURE OF TRUST AND MECHANISMS FOR ITS PRODUCTION

While this work by Head and Hassanein (2002) has the merit of highlighting a processual vision of trust which is lacking in previous research, the nature of trust and the mechanisms of its production are much less developed. In what follows, we take up the phases identified by these authors and attempt to provide some food for thought on the characteristics of trust in each of these phases.
### TABLE 2: ELECTRONIC TRUST: ATTEMPTING TO UNDERSTAND ITS DYNAMICS

<table>
<thead>
<tr>
<th>The consumer</th>
<th>Establishment</th>
<th>Reinforcement</th>
<th>Maintain</th>
</tr>
</thead>
<tbody>
<tr>
<td>The consumer has little or no familiarity with the merchant. They are looking for evidence that the merchant is trustworthy.</td>
<td>Once the first transaction has been successfully completed, the consumer has a proof of trust.</td>
<td>Satisfied with his past experiences, the consumer renews his trust in the merchant every time the opportunity arises.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nature of the trust</th>
<th>Initial Trust/ Presumptions of Trust</th>
<th>Proven trust</th>
<th>Trust confirmed</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Main mechanisms for generating trust</th>
<th>Satisfied with the first experience</th>
<th>Satisfaction with past experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>. Notoriety/reputation of the dealer/brand_trade name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>. Recommendations from third parties (relatives, third party organisations, ...)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>. Design and quality of the site</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2.1. THE ESTABLISHMENT PHASE

During this phase, the consumer looks for signals that the merchant is worthy of his or her trust. In the absence of prior experience, consumer trust is based on the judgment of others...
(reputation of the merchant, recommendation of a close relative….). Rather, it is an "initial" or "exploratory" trust that relies more on third party evaluations.

At this stage, a digression is necessary. Indeed, depending on the characteristics of the merchant, the intervening variables (reputation, recommendations, site quality) do not seem to have the same weight. Three cases deserve to be distinguished:

- For known Internet merchants whose existence is only virtual (Jumia.ma), reputation and notoriety are the main mechanisms underlying the development of trust.
- For known Internet merchants for whom the Internet is only an additional distribution channel (ikea.ma, oncf.ma), trust is largely the result of the transfer of trust capital acquired in the real world.
- For little-known Internet merchants, the issue of trust is more critical and complex because it is more difficult to establish. In this case, the first impression is important and even crucial. Third party recommendations and the quality of the site are particularly interesting.

2.2. THE MAINTENANCE PHASE

At this stage, it is the previous interactions that build trust. We will speak of "confirmed" trust. The consumer, satisfied with past experiences, is likely to engage in a long-term relationship with the trader. The seller's objective would be to enter into a relational perspective, the aim of which is to create a genuine relationship based on commitment. Maintaining trust for a seller on the Internet is far from being an easy task. On the one hand, the proliferation of merchant sites and fierce competition make it difficult to retain the loyalty of an increasingly volatile customer. On the other hand, due to the impersonal and unfriendly nature of the Internet, the transition from a succession of simple transactions to a real relationship seems more complex.
CONCLUSION

Without a minimum of trust, transactions are hardly possible. Indeed, it is trust that authorizes exchanges. In the context of the Internet, trust is crucial. It plays a critical role in the adoption of electronic commerce. The growing literature on the subject only confirms this (for example, Pavlou, 2003; Corbitt, Thanasankit and Yi, 2003).

The literature review gave us a panoramic view of the factors determining online trust. It emerges that the factors identified are notably inherent to the site (quality of navigation, security), the merchant (reputation), the Internet user (familiarity, propensity to trust) and the context (the risk linked to the web). However, in addition to these factors, trust can also be influenced by third parties (labels issued by certification bodies, testimonials from other consumers, site partners). It is clear that little attention has been paid to this type of determinant.

The study of the interaction between real and virtual trust suggests several avenues of research. In particular, the reciprocity of the trust transfer process is an interesting avenue to explore. If the work seems to focus on the transfer of trust from the real to the virtual, it is also interesting to question the reverse logic of this transfer. Doesn't trust in the virtual world have an influence on trust in the real world? Indeed, it would be legitimate to think that a delay in delivery or a payment problem during a purchase on the ABCD.ma website may undermine confidence in ABCD. Confidence in a site can therefore be reflected on confidence in the company and vice versa. This reflection, which is based on the principle of reciprocity of the transfer of trust, deserves to be deepened.
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