



Intuition, risk, and the formation of online trust



M. Mahdi Roghanizad^{a,*}, Derrick J. Neufeld^{b,1}

^a Department of Management Sciences, University of Waterloo, 200 University Avenue West, Waterloo, ON N2L 3G1, Canada

^b Ivey Business School, University of Western Ontario, 1255 Western Road, London, Ontario N6G 0N1, Canada

ARTICLE INFO

Article history:

Keywords:

Risk
Intuition
Trust
Consumer behavior
E-commerce

ABSTRACT

Understanding how consumers evaluate website trustworthiness is a critical factor for online vendors. The dominant view espouses a *deliberative* trust formation process whereby shoppers evaluate security certificates, return policies, user feedback and the like, implying a highly rational underlying trust calculus. In this paper we use a laboratory experiment to explore an alternative perspective, based on the non-rational *associative* reasoning approach. Our findings show that when faced with a no-risk hypothetical decision about whether or not they would purchase a book from an online bookseller, subjects' decision-making processes were indeed consistent with the dominant deliberative view. However, when confronted with a decision entailing risk (i.e., sharing sensitive personal information with an unknown website), subjects became reliant on their non-rational, gut-level intuition. We adopt a dual-process reasoning theory to make sense of these findings, and recommend that vendors take into account associative reasoning factors when designing online interfaces. Future research directions are provided.

© 2015 Elsevier Ltd. All rights reserved.

Intuition does not denote something contrary to reason, but something outside of the province of reason.

[Carl Jung]

1. Introduction

"In October 2001, a fire crew was fighting a fire in a disused bingo hall in Leicester in the UK. Even though it was big, the fire chief decided it was safe enough to send the crew into the building. They were starting to make progress in knocking the fire down when the fire chief decided something was wrong, and ordered his team out of the building. The team protested, unwilling to give up the progress they had made. But the fire chief insisted and as they exited the building it exploded in a massive fireball. If the decision to evacuate hadn't been made the entire team would have been killed. It turns out that the fire was one of the rarest and most dangerous phenomenon in firefighting – a backdraft. The fire chief had never experienced a backdraft before, he just knew that something was wrong and they needed to get out. In the ensuing investigation it turns out there were three things that were unusual: the smoke was more orange than usual, air was rushing into the building rather than out of it, and the fire was unusually

quiet. The fire chief was right in his decision, he just didn't know why at the time" (Schenk, 2009).

Though we engage them frequently, intuitive processes are difficult to conceptualize. In this paper we explore how intuition impacts our online purchase decisions. A user in search of a new smartphone discovers a plethora of competing vendors and conflicting value propositions: Samsung, Motorola, Apple or Blackberry? A family member scans online flower shops to select a bouquet to send to a distant loved one: Teleflora, ProFlowers, 1-800-Flowers.com, or FTD? A homeowner sifts through competing telecommunications bundles in search of the right offer: Comcast, Time Warner, Cox, or AT&T? Since information sources are rarely fully independent or reliable, intuition comes to the rescue and nudges the shopper to trust one particular vendor over the others.

Albert Einstein commented on the critical importance of intuition. "For it is intuition that improves the world, not just following the trodden path of thought. Intuition makes us look at unrelated facts and then think about them until they can all be brought together under one law . . . Intuition is the father of new knowledge, while empiricism is nothing but an accumulation of old knowledge" (Hermanns & Einstein, 1983: 16). The concept of intuition is grounded in Gestalt theory, which is captured in the phrase, "The whole is other than the sum of its parts" (Hothersall, 1984), or to put it more formally, "There are wholes, the behavior of which is not determined by that of their individual elements, but where the part-processes are themselves determined by the intrinsic nature

* Corresponding author. Tel.: +1 519 494 7720.

E-mail addresses: mmroghan@uwaterloo.ca (M.M. Roghanizad), dneufeld@ivey.uwo.ca (D.J. Neufeld).

¹ Tel.: +1 519 661 3258.

of the whole. It is the hope of Gestalt theory to determine the nature of such wholes” (Wertheimer, 1938, p. 4). Intuition is a form of Gestalt: an arriving at the whole without necessarily deliberately evaluating (or even being aware of) the individual elements. In the opening paragraph of this article, the fire chief experienced Gestalt—an intuitive sense that “something was wrong”, subconsciously cued by some combination of unusual events such as the orange-colored smoke, the intruding air, and/or the audibly quiet nature of the fire.

Intuitive judgments are automatic and effortless (Sloman, 1996), and become particularly salient in the presence of risk and ambiguity (Inbar, Cone, & Gilovich, 2010). Recent studies have confirmed the importance of non-rational factors in the formation of online trust intentions (Benedicktus, 2008a; Cyr & Head, 2013; Cyr, Head, & Larios, 2010; Ding & Lin, 2012; Komiak & Benbasat, 2004, 2006). Likewise, commercial website attractiveness has been associated with involuntary physiological responses among visitors (Sheng & Joginapelly, 2012), suggesting that an automatic subconscious judgment process is at play. On the other hand, research into online website use has shown that deliberative judgments about specific features (e.g., third party seals and privacy policies) are critical to trust formation (Özpolat, Gao, Jank, & Viswanathan, 2013). These two apparently conflicting streams of literature may lead researchers to consider “dual-process” reasoning, which has been previously established in the decision making literature and will be reviewed in the next section. With the rapid acceleration of online selling, reportedly topping \$1.47 trillion in 2014 (eMarketer, 2014), understanding how consumer trust is formed is an increasingly critical question for online vendors.

This paper investigates the applicability of dual-process reasoning to the online trust domain for both non-risky and risky decisions, in order to address the research question: How does non-rational ‘associative’ reasoning influence consumer trust formation in risky situations? The paper first presents a model of the intuitive trust building process, describes results from an experimental test of that model, and then offers practical implications.

2. Literature review and hypotheses

2.1. Dual-process reasoning

Our view of intuitive processes borrows a theory introduced by Steven Sloman (1996) comparing two alternative reasoning systems serving complementary functions: deliberative (rule-based) and associative (intuitive), summarized in Table 1.

Table 1
Characterization of two forms of reasoning (Sloman, 1996).

Characteristics	Deliberative reasoning	Associative reasoning
Principles of operations	Symbol manipulation	Similarity and contiguity
Source of knowledge	Language, culture, and formal systems	Personal experience
Nature of representation		
• Basic Units	Concrete, generic, and abstract concepts; abstracted features; compositional symbols	Concrete and generic concepts, images, stereotypes, and feature sets
• Relations	(a) Causal, logical, and hierarchical (b) Hard constraints	(a) Association (b) Soft constraints
Nature of processing	(a) Productive and systematic (b) Abstraction of relevant features (c) Strategic	(a) Reproductive but capable of similarity-based generalization (b) Overall feature computation and constraint satisfaction (c) Automatic
Illustrative cognitive functions	Deliberation Explanation Formal analysis Verification Ascription of purpose Strategic memory	Intuition Fantasy Creativity Imagination Visual recognition Associative memory

According to Sloman (1996), deliberative reasoning relies on firm rules such as the conjunction rule of probability $P(A) \geq P(A \& B)$, where $P(A)$ represents the probability of event A. This rule states that the probability of two events occurring together cannot be more than the probability of either of them occurring alone. It is also productive, meaning that given a new event C, one can infer that $P(A \& B) \geq P(A \& B \& C)$. Associative reasoning on the other hand operates on the basis of similarity, temporality, observations, frequencies and correlations among various features of the world to establish environmental regulations. In one famous study of the conjunction fallacy, for example, participants were given the following paragraph as a description of a hypothetical person: “Linda is 31 years old, single, outspoken and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in antinuclear demonstrations” (Tversky & Kahneman, 1983, p. 297). Participants were asked to rank order eight statements about Linda from most to least probable, including these two: (1) “Linda is a bank teller. (T)”, and (2) “Linda is a bank teller and is active in the feminist movement. (T & F)”. More than 80% of subjects ranked the probability of statement 2 higher than statement 1, despite the fact that the probability of statement 2 (T & F) must always be equal to or less than that of statement 1 (T). These results were especially powerful considering that many of the respondents were graduate students who would have possessed an advanced understanding of probability and decision-making. From this result, Sloman (1996) inferred that the subjects associated the characteristics in the paragraph with a woman who is a feminist, rather than relying on the deliberative rules at their disposal.

While deliberative and associative systems operate differently, an individual may attempt to use either one to solve a given problem. In order to discern which decision-making system has been used, a general heuristic is to determine the individual’s level of awareness about his or her own decision process – i.e., if they are aware only of the answer to a problem but cannot articulate the logic used to arrive at that conclusion, then they are likely relying on associative (intuitive) processes (Sloman, 1996). (An extended review of this literature may be found in Evans, 2008.)

2.2. Dual-process reasoning and trust

A considerable body of research has confirmed that intuitive reasoning plays a significant role in social interactions. For example, intuitive processes have been found to play essential roles in

Download English Version:

<https://daneshyari.com/en/article/6838223>

Download Persian Version:

<https://daneshyari.com/article/6838223>

[Daneshyari.com](https://daneshyari.com)