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# The role of product familiarity and consumer involvement on liking and perceptions of fresh meat



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#### ABSTRACT

The objective of this work was to compare consumer's liking and perception of meat quality attributes as a function of their familiarity and involvement with fresh meat.

Ninety-three meat consumers were classified on the basis of their familiarity with fresh meats. Sociodemographic differences between the clusters were found to relate to gender and age, and high familiarity (HF) consumers showed higher involvement with meat. HF consumers enjoyed consuming meat, and they associated a symbolic value to it. In addition, their liking ratings were higher than those of low familiarity (LF) consumers for both appearance and taste of three specific types of fresh meat over the course of product shelf-life. The perceived risks associated with meat consumption and product choice were similar between groups. Both consumer segments reported that the most important driver of fresh meat purchase is its appearance, while the role of extrinsic cues differed among the groups. The HF group needed more information when choosing meat. Regardless of familiarity level, liking was consistent with beef appearance as affected by storage, but the prediction of experienced sensory quality lacked consistency when the perceived intrinsic cue variation was not associated with meat freshness.

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#### 1. Introduction

Familiarity is one of the most important drivers of preference for food products, because it reduces product uncertainty and leads to a more likely match between expectations and product characteristics (Deliza & MacFie, 1996; Tuorila, Meiselman, Bell, Cardello, & Johnson, 1994). Familiarity may change consumers' risk perception, lowering concern about possible negative effects of the products and reducing consumer scepticism (Verbeke, Scholderer, & Lähteenmäki, 2009). Consumers' familiarity and expertise with a product category are a key moderator of the role played by extrinsic cues in the choice utility function (Chocarro, Cortiñas, & Elorz, 2009). For example, Banovic, Aguiar Fontes, Barreira, and Grunert (2012) segmented consumers on the basis of their familiarity with specific meat cuts, finding differences in their use of intrinsic and extrinsic cues in beef quality perception (Banovic et al., 2012). On the other hand, habitual behavior in purchase decisions are often made with little or no conscious effort (Alba & Hutchinson, 1987). To assess the degree to which consumers are habitual or more thoughtful in their decision-making, food involvement scales

\* Corresponding author. *E-mail address:* monica.borgogno@uniud.it (M. Borgogno). have been developed by which it is possible to assess the interest of consumers in specific foods or food categories (Laurent & Kapferer, 1985). Consumer involvement is defined as "the level of perceived personal importance, interest or relevance evoked by a stimulus or stimuli, which are linked by the consumer to enduring, situation-specific goals" (Verbeke & Vackier, 2004). Verbeke and Vackier (2004) classified consumers on the basis of their involvement with fresh meats, a multidimensional construct that includes pleasure value, symbolic value, risk importance and risk probability. Differences in the involvement profile can lead to differences in consumer attitudes toward meat, i.e. extensiveness of the decision-making process, impact and trust in information sources, levels of concern etc. Moreover, different levels of involvement with food have been related to different consumer profiles, allowing the identification of specific target consumer profiles, enabling food companies to develop specific marketing programs for these different consumer groups and to focus marketing activities on specific market segments (Drichoutis, Lazaridis, & Nayga, 2007). For example, Australian consumers, classified in terms of their fish consumption, were found to have different levels of food involvement. Higher consumption of fish was associated with higher levels of hedonic and symbolic value and a greater product importance than lower consumption (Birch & Lawley, 2014).



The objective of the present work was to investigate the involvement profile of fresh meat consumers and to evaluate the importance of several extrinsic and intrinsic product quality cues for consumers with either high or low meat familiarity. In addition, we investigate how different levels of product familiarity influence consumers' beef quality evaluations and, particularly, the liking for fresh meat appearance and taste. While appearance, especially color, is the most important intrinsic quality cue related to consumers' quality expectation of meat, taste is related to consumers' post-consumption quality experience. Both expected and experienced quality affect product acceptance and vary with the consumers' degree of product-related experience (Banović et al., 2012).

#### 2. Materials and methods

#### 2.1. Meat types and experimental design

In order to take into account meats with different appearance, three categories of cattle meat, veal (V), beef from young bull (B) and heifer (H), were considered and evaluated during their commercial shelf life at three predetermined intervals after packaging: 1, 3 and 6 days. The nine meat types were produced and packaged on different days, to be evaluated simultaneously on the same day. This experimental design was replicated three times during three consecutive weeks, using three different complete lots of samples. The supplier guaranteed the standardization of the feeding regime, the slaughtering of animals, and the processing procedures of meat, within and between lots, during the experiment. The cuts of meat were those available on the Italian market and were randomly presented among experimental groups. The top (also known as the inside) round cut, containing primarily the semimembranosus, sartorius, adductor, gracilis and pectineus muscles, was sliced into steaks (2.54 cm thickness) that were placed in polystyrene/ethylene vinyl alcohol/polyethylene trays and packaged by modified atmosphere technology. Trays were flushed with 80% O<sub>2</sub>:20% CO<sub>2</sub>.

#### 2.2. Selection of consumer panelists

The consumers were recruited from a mailing list of workers and students at the University of Udine, Italy. They were selected according to two major criteria: eating meat regularly and having responsibility for home food purchases. Respondents were interviewed by phone about their frequency of consumption of 11 types of fresh meat (7-point category scale: 1 = never; 2 = once a month or less; 3 = two-three times a month; 4 = once a week; 5 = two-three times a week; 6 = once a day 7 = more than once a day) and whether they usually purchase food for the home (I usually buy food, I sometimes buy food, I never buy food). Consumers who reported to eat fresh meat at least two/three times a month and who also were responsible for home food purchases were selected for further participation (Dinnella, Torri, Caporale, & Monteleone, 2014). This frequency of consumption, which is lower than that recommended by the World Cancer Research Fund and the American Institute for Cancer Research (2007), was chosen in order to engage consumers who were familiar with fresh meat but not individuals who might be considered "overconsumers" of beef. Ninety-three consumers of meat, 31 each week, were assigned to participate in the hedonic tests. Participants were 40% male and 60% female with an average age of 36 years old (range = 21 - 65).

#### 2.3. Consumer test

Consumer testing was performed at the University of Udine, in a laboratory built according to the UNI-ISO 8589:1990 standard. Consumers evaluated samples in individual booths under white incandescent light. They were compensated with some samples of meat (depending on the number of family members). The test was performed very close to lunch and/or dinner time, between 12.00–15.00 p.m. and 18.00–20.00 p.m., according to the availability of consumers.

Each consumer was first asked to indicate his/her liking for the appearance of the raw meat steaks using the LAM (Labeled Affective Magnitude) scale. The scale ranged from +100 to -100(anchored with "greatest imaginable like/dislike") (Schutz & Cardello, 2001). The samples of the nine meat types were presented in a blind condition, monadically, and randomized between panelists and sessions. Appearance evaluation was carried out on raw meat steak samples. Each slice was taken out of refrigerated storage, unpacked and placed on a white tray with a three-digit numeric code. Consumers, randomly divided in groups of eight, evaluated the same slice of meat. The taste of meat samples was evaluated after portioning (sample size =  $4 \times 3$  cm) and cooking, without added condiments or dressing. The firing was done in a convection oven at 230 °C with humidity control, until the sample reached 70 °C at the center of the product. Consumers ate unsalted crackers and drank mineral water to rinse their palate between samples. After every 3 samples, panelists were provided with a 5 min break. Each sample was placed in a white cup with a three-digit numeric code. The codes of raw and cooked samples were different, in order to avoid any association between appearance and taste. The data were collected using Fizz Acquisition software (2.46A, Biosystemes, Couternon, France).

### 2.4. Measures of consumer familiarity and involvement with fresh meat

At the end of the hedonic test, consumers were asked to complete a questionnaire concerning their familiarity with fresh meat. Consumers were asked to report their familiarity with 11 commercial classes of meat: poultry, beef, pork, turkey, veal, rabbit, game, barnyard animals, sheep, goat, heifer and other. Consumers scored their familiarity on a 5 point-scale, where 1 = I do not recognize the product; 2 = I recognize the product, but I have not tasted it; 3 = I have tasted, but I do not use the product; 4 = I occasionally eat the product; 5 = I regularly eat the product (Bäckström, Pirttilä-Backman, & Tuorila, 2004).

The involvement of consumers was measured using a 15-item scale comprised of 5 sub-dimensions developed by Laurent and Kapferer (1985). Each item was scored on a seven-point Likert (interval) scale, ranging from 1 = totally disagree to 7 = fully agree. The level of importance that consumers ascribe to different product cues that influence purchasing motives was assessed using a 5-pt scale, in which 1 = none or very little importance, 2 = little importance, 3 = average importance 4 = quite a lot of importance and 5 = great importance (Sepúlveda, Maza, & Mantecón, 2008). The specific cues were down-selected from the literature, considering both intrinsic and extrinsic cues. Appearance, marbling, leanness and "sensory property" expectations were the intrinsic traits that were chosen, all of which are directly related to product appearance. Credence attributes (extrinsic variables) were those associated with the production process (animal welfare, organic, quality certification, breed) (Bernués, Olaizola, & Corcoran, 2003). Other factors that affect the purchase motives were: type of packaging, label information, safety, traceability, known seller, cooking usage, known brand, price, nutritional value, and tradition Download English Version:

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