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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FOOD LABELLING

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OTHER BUSINESS AND FUTURE WORK DISCUSSION PAPER ON MISLEADING FOOD LABELS (prepared by the United States)

I. BACKGROUND

At the 27th session of the Codex Committee on Food Labelling (CCFL), the United States tabled a Conference Room Document on misleading claims and recommended that the Committee undertake new work to develop principles and guidelines to better ensure that food traded in international commerce is free of labelling that is misleading. The committee agreed to continue the discussion at the 28th session in that there had been insufficient discussion at the 27th session. The United States agreed to redraft its Conference Room Document as a discussion paper for further consideration at the 28th session, but was not able to do so before the meeting. Thus, the Committee agreed that this issue would be considered at the 29th session in May of 2001. The United States agreed to draft the discussion paper for consideration by the committee at this session.

This discussion paper is an effort to:

- characterize misleading communications on food labels and in labelling in a broad and neutral way (with an emphasis on communications that are truthful but misleading), and;
- offer an initial framework that may help further discussion in CCFL about misleading food labelling on a range of topics.

Although this paper offers some structure for viewing and discussing misleading labelling, it is not meant to represent the only useful framework. Nor is it intended to provide the final word on how to characterize misleading communications given the complexity of this subject. Further, although the paper addresses a range of misleading communications, it is not exhaustive.

In drafting this paper, the United States obtained assistance from two faculty members¹ at the American University to help develop a conceptual framework on misleading communications and to identify concepts from the marketing and psychological literature on how consumers can be misled. The United States is grateful to representatives from the delegations of Brazil, Canada, Mexico, and the European Commission and to a visiting researcher² who reviewed drafts of this paper and offered comments. It is hoped that as a result this paper may be more meaningful internationally.

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II. INTRODUCTION

Consumers around the world increasingly have access to new food products and more information about food. While these developments are generally positive, they have also raised concerns about the potential for more consumers to be misled by food labels. This topic is very important to Codex because of the large potential for misleading food labels to adversely affect both consumers and food trade.

Because of its importance, several of the standards and guidelines adopted by Codex contain provisions aimed at preventing misleading labelling. For example, the Codex General Standard for the Labelling of Prepackaged Foods states as a general principle that “prepackaged food shall not be described or presented on any label or in any labelling in a manner that is false, misleading or deceptive or is likely to create an erroneous impression regarding its character in any respect.” (CAC/Codex Stan 1-1985, Rev. 1-1991). The Codex General Guidelines on Claims also provide some examples of misleading claims in section 3 (prohibited claims), section 4 (potentially misleading claims), and section 5 (conditional claims) (CAC/GL 1-1979 (rev. 1-1991)). The Codex Guidelines for Use of Nutrition Claims further identify conditions for various types of claims that are aimed at preventing misleading labelling in section 5 (nutrient content claims), section 6 (comparative claims), section 7 (nutrient function claims) and section 8 (claims related to dietary guidelines or healthy diets) (CAC/GL 23-1997). The current work of the CCFL includes additional efforts to prevent misleading labelling on a range of topics.

The United States, the European Community and many national governments also have legislative and regulatory provisions and current initiatives that aim to prevent misleading labelling. Although these provisions and those of Codex often vary in the way that misleading labelling is described and the level of detail, they nonetheless appear to share some commonalities.

In suggesting a possible framework for characterizing misleading food labels, we have tried to identify such commonalities. This paper especially focuses on truthful but misleading communications, and explores factors that influence how consumers interpret food labels. The paper further identifies several types of misleading food labelling, presents examples of each type, and identifies some of the psychological mechanisms that may explain how consumers are misled. In addition, existing Codex standards or guidelines that relate to a specific type of misleading labelling are occasionally cited. This paper should be viewed as one possible means to assess commonalities among past, current, and future Codex standards and guidelines aimed at preventing misleading labelling. Finally, this paper briefly describes three possible approaches for preventing misleading labelling.

III. WHAT ARE MISLEADING COMMUNICATIONS?

Food manufacturers use statements, images, and other representations on food labels to communicate information about a variety of food product characteristics (e.g., its basic nature, identity, composition, quality, origin, method of production, or benefit to health).

These representations can be categorized as: truthful and non-misleading; false; and truthful but misleading. Truthful and non-misleading communications are literally true and do not lead consumers to make incorrect inferences. False communications are literally untrue, and lead consumers to make incorrect inferences.

Truthful but misleading communications are literally true but also lead consumers to make incorrect inferences. Both the presence and absence of information are relevant to whether labelling is misleading. For example, in the United States in determining whether food labelling is misleading, Federal law requires that the Food and Drug Administration (FDA) take into account not only statements and other representations that are made or suggested in labelling, but also if the labelling fails to reveal facts that are material³ with regard to representations made about the product or consequences that may result from its use.

³ FDA has generally interpreted “material fact” to mean information about the attributes of the food itself. Labelling based on material fact has been required when the absence of such information may pose a health risk, mislead consumers in light of other statements on the label, or cause incorrect inferences about the nutritional, organoleptic, or functional characteristics of a food because of its similarity to another food.

IV. WHAT FACTORS MAY AFFECT HOW CONSUMERS INTERPRET FOOD LABELS?

A. Environmental Characteristics

Environmental characteristics such as culture, personal contacts including family, the media, and advertising influence how consumers interpret information on food labels. The influence of culture is particularly important in understanding why consumers in different countries interpret identical communications differently. Culture can be defined as the values, preferences, and acceptable rules of behavior of a group (such as, people within a country or region) that are handed down from one generation to the next. Cultural differences influence the type of inferences, if any, that consumers make when they process a truthful label statement, symbol or image. Therefore, a communication may lead to misleading inferences in one culture but not in another. For example, consumers in one culture might perceive terms such as “premium” or “best” to imply superior quality, while consumers in another culture might disregard such terms because they view such statements as typical promotional exaggerations.

Media and advertising can also influence how consumers interpret food labels. For example, consumers are more likely to pay attention to a food label claim about a nutrient such as fat or sodium that has received extensive coverage in the media. This happens because media coverage tends to raise the prominence or importance of the claim (Ghorpade, 1986; Sutherland and Galloway, 1981). Also, exposure to a claim in advertising may create expectations or preconceived ideas in the minds of consumers. These expectations can bias the way in which consumers later interpret claims on food labels (Hoch and Ha, 1986; Ford et al., 1996). Techniques such as images and sounds used in advertising to attract consumers to a message may also contribute to misleading inferences and expectations when consumers see a related label.

B. Individual Characteristics

Consumers’ demographic characteristics (such as age, sex, or education) as well as their psychological characteristics (such as knowledge, experiences, or beliefs) also influence how they interpret labelling information. For example, less educated consumers and/or consumers who are less knowledgeable about nutrition are more likely to infer incorrectly that a low-fat food must be low in calories.

The impact of misleading communications often varies among different segments of a population. For example, the very young and the very old may be more easily misled, as may people who have certain medical conditions. For example, diabetics may be particularly attracted to labeling claims that a food is low in sugar or is sugar free. They may erroneously assume that all such foods are suitable for their special diet. Also, some population segments such as those identified above may be more vulnerable to harmful consequences from misleading communications.

C. Label Characteristics

Features of the label such as size, placement, language, punctuation, and grammar also influence how consumers interpret label information. For example, statements on food labels are sometimes qualified. If the qualification is in fine print or is placed in a location where consumers are unlikely to notice it, consumers may be misled.

V. WHAT ARE SOME TYPES OF MISLEADING FOOD LABELLING?

This section addresses several types of misleading communications, and provides examples of each. It further discusses for each type of communication the psychological mechanisms that may explain how consumers are misled. A brief description of each is presented in the table below. It should be emphasized that the five types identified below do not represent distinct categories. For example, a communication can mislead consumers both because it has confusing language and because it leads to false inferences about a characteristic (i.e., attribute) of a food product.

It should also be noted that some of these types of misleading communications are more common in some countries than in others. This occurs in part because of the varying national policies, regulations and statutes that govern food labelling.

Further, there was an attempt to illustrate with a limited number of examples the broad range of truthful communications that can be misleading – whether they be misleading words, statements, or images-- or communications about a product’s food composition, origin, or other characteristic. In addition, this section cites on occasion examples of misleading communications that can result from a brand name of food product. It is recognized that in some countries brand names are not subject to regulation or oversight. The examples nonetheless may help illustrate misleading communications that appear on other parts of the food label.

Some Types of Misleading Communications	DESCRIPTION
Omission of a Material fact	A communication is misleading because a material fact has been omitted.
Confusion-Based Misleadingness	A communication is misleading because of confusing language, symbols, or images.
Same-Attribute Misleadingness	A truthful communication about an attribute of a product leads to misleading inferences about the <u>same</u> attribute in that product or in other products in the same or similar category.
Different-Attribute Misleadingness	A truthful communication about an attribute of a product leads to misleading inferences about a <u>different</u> attribute in that product or in other products in the same or similar category.
Source-Based Misleadingness	An endorsement by an organization or individual(s) leads to misleading inferences.

A. Omission of a Material Fact

Overview

Food product labels are sometimes misleading because a material fact has been omitted. For instance, a label may fail to disclose information that is material to a consumer’s need to correctly interpret statements on the label. Or, a label may fail to disclose facts that are material with regard to adverse consequences to consumers that may result from the product’s use.

Discussion

An example of an action in the United States to prevent omission of a material fact involves unpasteurized juice. Juice has traditionally been considered an unlikely vehicle for bacterial survival and growth because of its acidic nature. However, recent evidence in the United States has demonstrated that certain unpasteurized juices have been the vehicle for outbreaks of foodborne illness. Furthermore, certain populations are at greater risk of serious injury or even death from consumption of unpasteurized juice. Thus, if the label of an unpasteurized juice did not alert consumers, especially those at greatest risk, to the potential hazard associated with the juice, consumers could be misled. Consequently, the additional disclosure, i.e., warning statement, that the product has not been pasteurized and, therefore, may contain harmful bacteria and cause serious illness in certain populations is a material fact for these consumers.

The psychological literature on schemas may help explain consumer inferences that arise when material facts are omitted (Alba and Hasher, 1983; Kardes, 1993). A schema is a person’s knowledge and experience about a particular concept. For example, most U.S. consumers have a schema that juice beverages are safe to drink. Thus, in the absence of disclosure of a material fact about the potential adverse consequences of the use of unpasteurized juice beverages, people will assume the product is safe for everyone.

B. Confusion-Based Misleadingness

Overview

Consumers may be misled by the use of confusing language, symbols, or images on packages. Confusion often occurs because a promotional communication uses a word, phrase, symbol, or image that is similar to a more familiar word, phrase, symbol or image, but that does not have a similar meaning. Such confusion is likely to cause consumers to misperceive or to miscomprehend the communication. This may be of particular concern when labels are translated or a product is exported.

Discussion

When a label for a food product says “only one gram of sodium,” consumers may be misled into believing that the product is low in sodium. In reality, one gram is equivalent to 1000 milligrams of sodium – a high amount of sodium.

Research on pragmatic implication may help explain the effects of confusing language (Alba and Hasher, 1983; Harris and Monaco, 1978, Harris et al., 1989). Pragmatic implications are inferences that are strongly implied or invited rather than asserted directly. For example, a truthful statement such as “only one gram of sodium” is likely to mislead some consumers because they erroneously interpret the claim to mean “very little.”

Consumers are sometimes misled by confusing brand names. A food company introduced a line of pasta sauce in the United States marketed under the brand name “Fresh Italian.” However, the sauce contained heat-processed, remanufactured tomatoes. In another example, a juice manufacturer marketed its orange juice under the brand name “Fresh Choice.” However, the product was made from frozen concentrate and contained orange oil and essence to enhance the flavor. In both cases, the manufacturers might argue that the source of the ingredients is “fresh” tomatoes or oranges. However, the statement “fresh” would likely confuse and mislead consumers because they would assume that a “fresh” product contains unprocessed ingredients only. Subsequently, the line of pasta sauce was changed from “Fresh Italian” to “Fino Italian,” and the term “fresh” was dropped from the labelling of the orange juice. As another example of a confusing brand name, in another country a low-fat milk product is marketed under the name “Zero,” which may give consumers the mistaken impression that it contains no fat.

Confusion-based misleadingness can often occur on labels that refer to a particular geographic area in the product name. Consider the case of “Louisiana Hot Sauce”, a well-known condiment sold in the United States. The manufacturer may intend the name to suggest that the product is a “Cajun-style” hot sauce. However, some consumers may be confused by the reference to “Louisiana” and assume that the product is made in the state of Louisiana. The degree to which consumers are misled may depend on the extent to which a phrase has become accepted as a commonly used or generic phrase in the language such that it does not imply a place of origin to consumers. For example, American consumers would be unlikely to believe that Boston baked beans and New York cheesecake are produced exclusively in Massachusetts and New York, respectively.

One interesting cause of confusion-based misleadingness is that terms are interpreted differently in different cultures and even by different people in the same culture. For example, superlative terms such as “premium” and “best” are prohibited as part of descriptions of beer in the United Kingdom, whereas in the United States, these terms are commonly used on beer. British regulators appear to be concerned that consumers might interpret these terms as signifying that the particular brand of beer has a higher quality than the average beer. In the United States, such terms when used on beer are regarded as “puffery,” i.e., exaggerated statements that are not taken seriously by consumers.

C. Same-Attribute Misleadingness

Overview

A truthful communication about an attribute of a product may lead to misleading inferences about the same attribute in that product or in other products in the same or similar category. Some of the types of inferences that consumers may make are discussed below.

Discussion

For example, consumers may interpret an attribute statement on a brand of vegetable oil (“Contains No Cholesterol”) to imply uniqueness (e.g., brand X is the only brand of vegetable oil without cholesterol) or superiority (e.g., brand X has less cholesterol than other brands of vegetable oil). Thus, consumers may make inferences about competing brands although no explicit comparisons have been made. To the extent that adequate proof does not exist to support such uniqueness or superiority inferences, the consumer may be misled. An example of an existing Codex guideline that seeks to prevent this type of misleadingness is paragraph 5.2 in the Guidelines for Use of Nutrition Claims. This provision states that “where a food is by its nature low in or free of the nutrient that is the subject of the claim, the term describing the level of the nutrient should not immediately precede the name of the food but should be in the form “a low (naming the nutrient) food” or “a (naming the nutrient)-free food”. The United States and a number of other countries have similar provisions in their laws or regulations. For example, a provision of the European Community legislation is that the labelling of a food must not suggest that it possesses special characteristics when in fact all similar foods possess such characteristics (Article 2 of Directive 2000/13/EC).

Studies on “feature-absent” inferences may help explain why consumers can interpret the above statements to imply uniqueness or superiority (Burke et al., 1997; Simmons and Leonard, 1990). This research suggests that when a brand prominently features an attribute that is not typically emphasized on labels or in advertising (e.g., the presence of vitamin E or absence of cholesterol in a vegetable oil), consumers may infer that other brands in the category differ with regard to that attribute. Consequently, mention of the attribute by one brand leads to the inference that this brand is unique or superior on this attribute.

Consumers also sometimes make false inferences about an attribute statement on a product based on their expectations of the manufacturer’s intent. For example, consumers may interpret a communication about an attribute (“contains dietary fiber”) to imply that the food is a good source of that attribute. To the extent the food possesses only a small amount of the attribute, the communication would be misleading. In the 1980’s, when statements about the health benefits of eating dietary fiber were widespread in the United States, products such as doughnuts (small ring-shaped cakes cooked in fat), which contain very small amounts of fiber, made statements such as “made with dietary fiber “ or “contains dietary fiber.” Since these doughnuts were found to contain an insignificant amount of fiber, consumers were likely misled by such statements. Similarly, consumers may interpret the claim “85% fat-free” on a food to imply that it is low in fat, when in many products, a 15% fat content is quite high. Thus, the use of this claim could be misleading. As another example, a manufacturer might make a representation that a brand is superior to other brands or to other formulations of their brand on an attribute (“Brand X has less fat than Brand Y”). Some consumers may make more general inferences about the brand on this attribute (e.g., Brand X has substantially less fat than Brand Y).

When such inferences are false, consumers are misled, unless the use of such terms are accompanied by additional disclosure or are substituted with other terms that may not cause false inferences. An example of a Codex guideline that seeks to prevent this type of misleading labelling is paragraph 6.2 in the Guidelines for Use of Nutrition Claims. In this paragraph, one of the conditions for making a comparative claim is that the amount of difference in the energy value or nutrient content be given.

The above examples show how truthful communications on food labels can lead consumers to make false inferences about the amount of a nutrient in a product or in competing products. But truthful communications on food labels can also lead consumers to make false inferences about the attribute itself. For example, when a food label makes a claim that a product is “free” of an attribute, the consumer may infer that the attribute is undesirable for some if not all consumers, and should be limited or avoided. When this inference is true, then such a statement would not be misleading (for example, a representation

on a food label that a product is “saturated fat free”). However, when the inference is false, such a statement on the label would mislead consumers about the characteristics of the particular attribute and the food. For example, a representation on a label that a product is “free of synthetic vitamins” or that it “contains no synthetic vitamins” is likely to mislead some consumers if they erroneously believe that the attribute (synthetic vitamins) is undesirable. As a result, they may also make a broader false inference that a product without this attribute is superior (e.g. that it has greater nutritional value or is safer).

A picture or image on a food label can also sometimes lead to misleading inferences about an attribute of a product. For example, a picture on the label of a container of mixed nuts might show a large quantity of an expensive nut when very few are actually in the container.

The concept of pragmatic implication that was discussed in the previous section on “confusion-based misleadingness” helps explain why the communications in this section are misleading. That is, these inferences likely occur because consumers make inferences about the likely intent of the manufacturer (Alba and Hasher 1983). For instance, when consumers interpret the statement “contains dietary fiber” to imply that the food is a good source of dietary fiber, this may be based on the assumption that such an interpretation is intended by the manufacturer. The expectation is that the manufacturer would not make such a statement if the product contained only a trivial amount of the nutrient. Similarly, some consumers may interpret a claim such as “Brand X has less fat than Brand Y” to imply that Brand X has substantially less fat than Brand Y. Consumers may assume that the manufacturer wouldn’t promote such a comparison if there were only a very small difference in fat. Furthermore, consumers may assume that a manufacturer wouldn’t make a claim that a product is “free of synthetic vitamins” unless a product without this attribute was in some way superior.

D. Different-Attribute Misleadingness

Overview

A truthful communication about an attribute of a product may also lead to misleading inferences about a different attribute in that product or in other products in the same or similar category. This may occur when a consumer wrongly believes that two attributes are correlated.

Discussion

For example, when a product bears the claim “no tropical oils” or “no cholesterol” consumers may infer that the product is also low in saturated fat. Consumers will be misled if the product contains a large amount of saturated fat per serving. Further, consumers may be harmed if they select such products thinking that they will reduce their risk of heart disease, when in fact consumption of products with a large amount of saturated fat will increase their risk. An example of a Codex guideline that seeks to prevent this type of misleading labelling is the provision in the Codex Guidelines for Nutrition Claims that a food product not exceed specified saturated fat levels when a “low cholesterol” or “cholesterol-free” claim is made. Consumer miscomprehension may occur even if the amount of saturated fat is disclosed on the label because consumers might not correlate the information with the claim.

Evidence that consumers process information in this manner comes from the literature on inferences based on logical or probabilistic consistency. This literature suggests that prior knowledge and expectations regarding the association between two attributes (“foods that are low in cholesterol are also low in saturated fat”) influences information processing when information about only one of the two attributes (e.g., cholesterol) is provided (Guthrie et al., 1999; Levy et al., 1993; Reid, 1992). Several studies have shown that consumers make inferences in this manner (Broniarczyk and Alba 1994; Dick et al., 1990; Ford and Smith, 1987; Huber and McCann, 1982).

E. Source-Based Misleadingness

Overview

Consumers are frequently exposed to endorsements by organizations or individuals that are perceived to be authoritative. Although there are circumstances in which an endorsement is not misleading (e.g., a logo sponsored by a national government for a particular purpose), there are many situations where endorsements may mislead consumers. First, consumers may be misled when the individual or endorsing organization has a financial relationship with the manufacturer and therefore, does not provide an unbiased opinion. Second, a manufacturer might prominently mention a credible organization or display its logo on a food label, and consumers may assume erroneously that the product has been endorsed by the organization. Third, when a company asserts that a majority of relevant experts endorse its product, consumers may assume that a representative sampling of experts is being offered. However, in many cases, the company will present only the opinions of experts who favor the product.

Discussion

For example, some manufacturers create and/or support “independent” sounding organizations that then endorse the manufacturer’s products or positions. For example, a food manufacturer may create an organization called “Institute for Responsible Food Choices” and then include a statement on its label that such an organization endorses the manufacturer’s products. Consumers will likely infer that this organization provides an unbiased expert opinion.

An infant formula manufacturer might make the statement “recommended by more pediatricians than any other formula.” In reality, 80% of the pediatricians surveyed may have expressed no preference for any one formula. Thus, while this statement may be literally true, the implication that a majority of pediatricians prefer the formula is misleading.

An orange juice manufacturer might display the logo of a cancer prevention organization and include a reference to its recommendation to eat more fruit and vegetables. Consumers would be misled if they infer that the organization endorses this brand of orange juice as a means of preventing cancer.

The concept of representativeness may help account for source-based misleadingness. (Gillovich et al., 1985; Kahneman and Tversky, 1973; Tversky and Kahneman, 1971, 1974, 1982). Representativeness suggests that a product endorser (such as an organization) that superficially looks and sounds like a credible source is judged as such even though deeper analysis might suggest otherwise.

VI. WHAT ARE SOME APPROACHES FOR PREVENTING MISLEADING FOOD LABELLING?

The research literature has demonstrated many of the ways truthful label information can nonetheless be misleading to consumers. Social science provides tools to help better understand when and how label information may be misunderstood. For example, research methods, such as consumer surveys and focus groups (small group discussions with a trained moderator), provide data on consumers’ expectations and beliefs that may affect how consumers will interpret label information as well as consumers’ reactions to specific examples of potentially misleading label information. These research methods can also be used to evaluate options for reducing or eliminating misleading communications in order to find the best approach for solving the problem.

This section describes three possible approaches that countries often use to prevent misleading labeling. They may be implemented in different ways. For example, they may be implemented by means of legislation or regulation (a mandatory means), or by codes of conduct established, controlled, and managed by industry (a voluntary means).

A. Disclosures

One way to minimize or eliminate misleading inferences that consumers may draw from food labels is to require that additional information (i.e., disclosures) be placed on the label. Two major forms of required disclosure could be used to prevent misleadingness: unconditional and conditional disclosures. The former

require that certain information be disclosed on all labels for certain foods, while the latter are used only to prevent misleadingness that arises when a specific statement appears on the food label.

Unconditional disclosures are particularly appropriate when information disclosed to consumers concerns an entire class of foods and is material to the purchasing decision of all or a segment of consumers. In the United States, for example, unpasteurized juice beverages are required to bear the disclosure, “WARNING: This product has not been pasteurized and, therefore, may contain harmful bacteria that can cause serious illness in children, the elderly and persons with weakened immune systems.”

Conditional disclosures are appropriate only when particular statements, symbols or images would be misleading without the provision of qualifying information. For example, if a food label bears the claim “no salt added” and the food is not sodium-free, a disclosure that “This is not a sodium free food” would ensure that consumers would not make an incorrect inference. A second example of conditional disclosure is identified in legislation of the European Community. Nutrition labelling is required only when a nutrient claim has been made about the food. The information on the nutrition label helps to confirm or correct consumers’ inferences about the nutrient content of the product (e.g., whether a product with a no cholesterol claim is also low in saturated fat). A third example of a conditional disclosure is identified in the Canadian Guide to Food Labelling and Advertising. In that country, the disclosure of a financial relationship between an endorsing organization and marketer is required whenever an endorsement by the organization appears on the food label.

B. Standards

Another way to prevent misleadingness is to establish standards that must be met before specific representations can be made on a food label. Standards can be established by defining specific terms that can be used on foods or by developing criteria that a food must meet before it can bear certain terms. For example, Codex has established standardized definitions for the terms “free” and “low” as they relate to making claims about the level of energy, fat, cholesterol, sugars and sodium on any food product (CAC/GL 23-1997). Likewise, Codex has established criteria that a food must meet before it can bear the term “organic” to ensure that the term is not used in a manner that is misleading.

C. Prohibitions

Another approach is to prohibit representations that are judged as inherently misleading. This is most appropriate when other approaches to eliminating potential misleadingness are likely to be ineffective. In the United States, for example, claims such as “fat free” or “low sodium” are prohibited for foods that are inherently free of fat or low in sodium. Thus, a food label would be prohibited from including the statement “fat-free apple sauce” or “low-sodium orange juice.” As another example, other countries might prohibit a claim of “natural juice” on juice-containing beverages that contain other added ingredients (including added sugars).

VII. CONCLUSION

Misleading communications often involve statements, symbols, or images that are literally true but lead consumers to make false inferences. The interpretation of misleading claims may be affected by factors such as culture, knowledge and education, and label characteristics. Thus, a label that is misleading to one group or culture may not be misleading to another. Labels can be misleading in different ways: because a material fact has been omitted, because confusing language or symbols are used, because consumers make incorrect inferences to an attribute which is the subject of a claim or other communication, because consumers make incorrect inferences to unmentioned attributes, and because an endorser is improperly used. The psychological mechanisms that explain how consumers are misled by each of these types of misleading communications have been studied extensively in the literature. Misleading representations on the food label can be prevented in different ways—for example, by requiring additional information, by establishing standards, or by prohibiting representations that are judged inherently misleading.

As Codex continues its work in elaborating recommendations, guidelines and standards in the area of food labelling, it is hoped that this initial framework will help identify the potential for truthful but misleading labelling and guide the CCFL in preventing such misleading communications.

VII. REFERENCES

- Alba, J. W. and L. Hasher (1983), "Is Memory Schematic?" Psychological Bulletin, 93 (2), 203-231.
- Broniarczyk S. M. and J. W. Alba (1994), "The Role of Consumers' Intuitions in Inference Making," Journal of Consumer Research, 21 (December), 393-407.
- Burke, S. J., S. J. Milberg, and W. W. Moe (1997), "Displaying Common but Previously Neglected Health Claims on Product Labels: Understanding Competitive Advantages, Deception, and Education," Journal of Public Policy & Marketing, 16 (2), 242-255.
- Dick, A., D. Chakravarti, and G. Biehal (1990), "Memory-Based Inferences During Consumer Choice," Journal of Consumer Research, 17 (June), 82-93.
- Ford, G. T. and R. A. Smith (1987), "Inferential Beliefs in Consumer Evaluations: An Assessment of Alternative Processing Strategies," Journal of Consumer Research, 14 (December), 363-371.
- Ford, G. T., M. Hastak, A. Mitra, and D. J. Ringold (1996), "Can Consumers Interpret Nutrition Information in the Presence of a Health Claim? A Laboratory Investigation," Journal of Public Policy & Marketing, 15 (1), 16-27.
- Ghorpade, S. (1986), "Agenda Setting: A Test of Advertising's Neglected Function," Journal of Advertising Research, 26 (Aug/Sep), 23-27.
- Gilovich, T., R. Vallone, and A. Tversky (1985), "The Hot Hand in Basketball: On the Misperception of Random Sequences," Cognitive Psychology, 17, 295-314.
- Guthrie, J. F., B. M. Derby and A. S. Levy (1999). What people know and don't know about nutrition. In: E. Frazao (Ed.), *America's Eating Habits: Changes and Consequences* (pp. 243-280). (Agriculture Information Bulletin No. 750). Washington D.C. U.S. Department of Agriculture.
- Harris, R. J. and G. E. Monaco (1978), "The Psychology of Pragmatic Implication: Information Processing Between the Lines," Journal of Experimental Psychology: General, 107, 1-22.
- Harris, R. J., M. L. Trusty, J. I. Bechtold, and L. Wasinger (1989), "Memory for Implied versus Directly Stated Advertising Claims," Psychology & Marketing, 6 (2), 87- 96.
- Hoch, S. J., and Y. Ha (1986), "Consumer learning: Advertising and the Ambiguity of Product Experience," Journal of Consumer Research, 13 (2), 221-233.
- Huber, J. and J. McCann (1982), "The Impact of Inferential Beliefs on Product Evaluations," Journal of Marketing Research, 14 (August), 324-333.
- Kahneman, D. and A. Tversky (1973), "On the Psychology of Prediction," Psychological Review, 80, 237-251.
- Kardes, F. R. (1993), "Consumer Inference: Determinants, Consequences, and Implications for Advertising," in Advertising Exposure, Memory, and Choice, A. A. Mitchell, et al. (eds.), Hillsdale, N.J.: Lawrence Erlbaum Associates, 163-191.
- Levy, A. S., S. B. Fein, and M. Stephenson. Nutrition knowledge levels about dietary fats and cholesterol: 1983-1988. Journal of Nutrition Education 25 (2), 60-66.
- Reid, D. R. Consumer Use and Understanding of Nutrition Information on Food Package Labels. Summary Report. p. 45. July 1992. National Institute of Nutrition. Canada.**

Simmons, C. J. and N. H. Leonard (1990), "Inferences About Missing Attributes: Contingencies Affecting Use of Alternative Information Sources," Advances in Consumer Research, 17, 266-274.

Sutherland, M., and J. Galloway (1981), "Role of Advertising: Persuasion or Agenda Setting?" Journal of Advertising Research, 21 (5), 25-29.

Tversky, A. and D. Kahneman (1971), "Belief in the Law of Small Numbers," Psychological Bulletin, 76, 105-110.

Tversky, A. and D. Kahneman (1974), "Judgment under Uncertainty: Heuristics and Biases," Science, 185, 1124-1130.

Tversky, A. and D. Kahneman (1982), "Judgments of and by Representativeness," Judgment Under Uncertainty: Heuristics and Biases, D. Kahneman, P. Slovic, and A. Tversky (eds.), Cambridge, England: Cambridge University Press.