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Intern. J. of Research in Marketing 11 (1994) 97–105

International Journal of  
**Research in  
Marketing**

## The consumer–environment interaction: An introduction to the special issue

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(Final version received October 1993)

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### Abstract

This article introduces the five papers presented in this special issue of the *International Journal of Research in Marketing* that focuses on consumer behavior and the environment. A model of the interaction between consumer cognition, behavior and the physical-tangible environment is developed, and the location of each of the papers in the model is indicated. The model combines a classification of the environment with insights in the interactions between consumers and the environment. Scales of the environment, micro, meso and macro, and aspects of the environment, tangible and intangible, are distinguished. Eight types of interactions between cognition, behavior and the environment are specified on the basis of reciprocal determinism theory and notions from environmental psychology. Based on the model, directions for future research in marketing on the interactions between consumers and the physical-tangible environment are formulated at the conclusion.

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### 1. Introduction

The environment is omnipresent. To a consumer, the environment includes the culture and subculture she is part of, her family, reference groups and friends, external conditions like inflation and unemployment, situational effects and the marketing environment. To a business, the environment comprises the economic environment, capital and labour markets, competitors, the government, suppliers, the ecology, technology, socio-cultural forces and demographics. While the marketing activities of organizations

are a part of the environment of consumers, the behaviors of consumers are part of the environment of organizations. And consumers and organizations are both surrounded by yet other environments.

This special issue of the *International Journal of Research in Marketing* focuses on the relationship between the consumer and the physical-tangible environment. In this lead article to the special issue we will (1) develop a model of the interactions between the environment and the consumer, (2) indicate which aspects of the model are covered by the articles in the special issue, (3) and suggest directions for further theory development and research which evolve from the model. The special issue's articles cover the range of

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consumer–environment interactions, from behaviors impacting the natural environment (e.g., “Green Marketing”) to marketing-dominated environments impacting consumer behavior.

## 2. Consumer–environment interaction

The study of the field that can roughly be described as “the person–environment interaction” is well established and covers areas as diverse as urban planning, interior design, human factors engineering, resource management, and public transportation. As early as the 1940s the geographer Wright (1947) studied how people’s conception of their environment affect their spatial behavior, while the psychologist Tolman (1948) studied cognitive maps in animals and humans. In anthropology, Hall (1959) demonstrated how spatial distances between people are a “silent language” that affects perception and behavior. Since these early studies, research re-

sults have steadily accumulated, and they have had impacts on policy, planning, and design in natural and built environments. However, as Moore (1987, p. 1371) argues, the field of the person–environment interaction is still in a preparadigmatic stage, lacking a major unifying theoretical perspective or framework. He (Moore, 1987, p. 1390) identifies a pressing need to define taxonomies of environments and environmental variables, and to specify the relationships between attributes of environments and behavioral outcomes. Here, a model is developed of the interaction between the physical-tangible environment and the consumer, that meets the taxonomical and relational needs called for by Moore.

Fig. 1 presents the first step to a general model of the structural and dynamic aspects of consumer–environment interaction. The consumer is the nucleus of the model. The nucleus is that part of the world that the consumer considers to be “me”; it is divided into one part covering internal or cognitive-affective processes

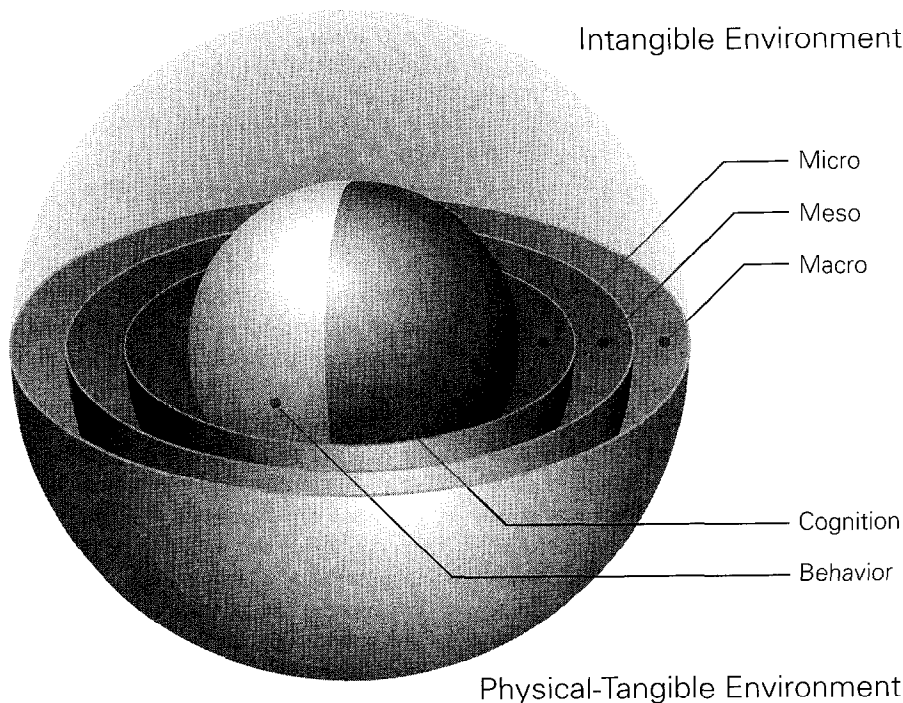


Fig. 1. The structure of consumer–environment interactions.

(labeled “Cognition”), and another part covering external or conative processes (labeled “Behavior”). The consumer is surrounded by a sphere that represents the environment of the consumer, i.e., the part of the world that is considered by the consumer as “not me”. Although many different features of environments can be distinguished (e.g., Craik and Feimer, 1987), two dimensions of the structure of the consumer’s environment that are relevant to the present analysis are singled out.

Previous authors have discussed different types or kinds of environments. In environmental psychology, Wapner (1987) distinguishes the physical-tangible domain of the environment, from the interpersonal and sociocultural domain. The physical domain includes, in his description, objects, varying in scale from things to buildings and cities, both built and natural, disasters, urban change and transportation. The interpersonal domain comprises the number of people, the composition of groups, their characteristics and the like. The sociocultural domain comprises economic aspects, technology, education, legal aspects, mores (e.g., attitudes toward shopping), political, recreational and religious issues. Other types of environments could be distinguished. Jain (1990) distinguishes five different types of environments of businesses that are relevant from a consumer perspective as well: technological, political, economic, regulatory and social.

In Fig. 1, a general distinction is made between the tangible part of the environment, connoting to the purely physical environment (both natural and built), and the intangible part of the environment. The physical-tangible environment is the bottom, nontransparent, part of the sphere, while the intangible environment is the top, transparent, part of the sphere. The intangible environment incorporates the technological, social, political, economic and regulatory domains. Note that for example a specific technological innovation may lead to a change in the tangible attributes of a product but that technology itself is intangible. The same holds for the other domains in the intangible part of the consumer environment. The tangible and intangible domain of the environment are interrelated, as changes in

the intangible domain (e.g., shifting economic values) may translate into changes in the tangible domain (e.g., changes in wages), and the other way around.

The *scale of the environment* of the consumer ranges from the micro environment via the meso environment to the macro environment. Working in architecture, Saarinen (1976) suggested that external or extrinsic conditions that are in a geographical sense near the person, like clothing, belong to the micro environment; buildings constitute the meso level and the natural environment or large built environments such as cities constitute the macro level. The boundaries between the three main categories of scale of the consumer environment are not firm. From the tangible product, to the shelf, to the aisle, to the store, to the mall, to the city, to the county and so on, the consumer environment expands from the micro to the meso and macro. More important than defining the exact borders between the scales of the environment is the recognition that environments are nested spheres.

In the model the type and the scale of the environment of the consumer are combined.

### 3. Dynamics of consumer–environment interaction

The interactions between consumers and the environment form a system of reciprocal determinism (Bandura, 1978; 1986), in which cognition, the environment and behavior cannot be understood in isolation, as they all operate as interlocking determinants of each other. Hence, it is as valid to say that the environment influences cognition and behavior, as it is to say that behavior influences cognition and the environment, and so forth. Most environmental influences impact on behavior through intermediary cognitive processes, but cognitive processes partly determine which aspects of the environment are attended to and how they are perceived. Likewise, the behaviors of consumers generate experiences that affect expectations about the future that determine behaviors that impact the environment. Of course, “... it is true that behavior is

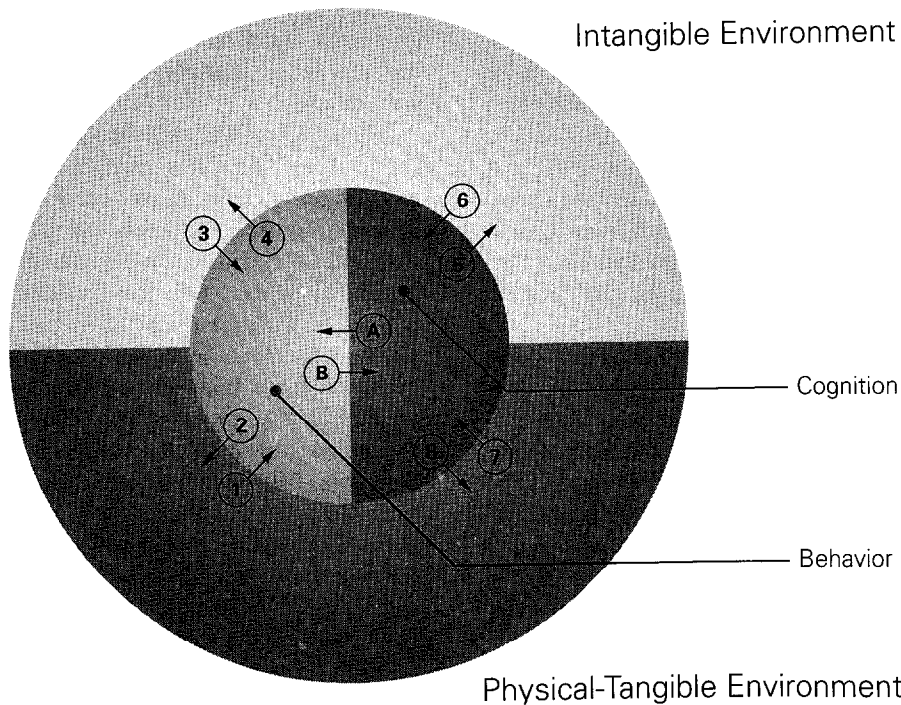


Fig. 2. The dynamics of consumer-environment interactions.

influenced by the environment, but the environment is partly of a person's own making. By their actions, people play a role in creating the social milieu and other circumstances that arise in their daily transactions" (Bandura, 1978, p. 345). Suppose, as an example, that a large proportion of consumers increase their purchase of a particular brand upon the brand's issuing of coupons, and suppose that the brand management reacts on the sales increase by continuing to issue coupons, the question then becomes: "who is controlling whom?" Are the consumers controlling the marketing environment or is the marketing environment controlling the consumers?

In reciprocal determinism, the environment exists potentially for all consumers, but it is only actualized by their behaviors. Consumers influence their environments by behaving in certain ways and the environments influence the subsequent behavior of consumers, as is emphasized by Winston Churchill in "We shape our buildings and afterwards our buildings shape us".<sup>1</sup> Al-

though there is reciprocal determinism of the three components, i.e., environment, cognition, and behavior, any of the components may, of course, be more influential than the others at any given time.

Stokols (1978) distinguished four modes of interactions (in his terminology "transactions") between people and the environment, based on the form of interaction, either cognitive or behavioral, and the role of the person in the interaction either active or reactive. His classification fits nicely in the present analysis. Cognitive-active interactions are of the *interpretive* mode, and deal with cognitive representations of the environment. Behavioral-active interactions form the *operative* mode, and deal with the environmental impact of behavior. Reactive-cognitive interactions are the *evaluative* mode, dealing mainly

<sup>1</sup> Quoted in chapter 3 of Saarinen (1976). See also his end note on the tradition of this quote.

with environmental attitudes, like attitudes toward public transportation, and beliefs associated with pro-environmental behavior. Finally, reactive-behavioral interactions form the *responsive* mode, dealing with the impact of the environment on behavior, like the effect of crowding in supermarkets on choice.

The dynamic aspects of the consumer–environment interaction model follow from reciprocal determinism and Stokols' classification, and are presented in Fig. 2. Arrows in Fig. 2 depict the specific interactions between the components of the model. The arrows have numbers and letters placed for the purpose of reference.

The odd numbered arrows represent the environment's (both tangible and intangible, and ranging in scale from micro to macro) impact on the consumer (both the cognitive-affective and behavior component). Arrows 1 and 3 represent the tangible and intangible environment's impact on behavior (responsive mode). The environment can impact behavior in both a facilitating (e.g., a coffeemaker allows one to make coffee faster than without it) or inhibiting fashion (e.g., a burned fuse may inhibit one from watching television). The arrow also represents reinforcing (e.g., praise) and punishing (e.g., social disapproval) aspects of the environment contingent on behavior. Research on the (direct) behavioral effects of store design, price changes, and sales promotions is represented by these arrows. Arrows 5 and 7 represent the tangible and intangible environment's impact on cognition (the evaluative mode). These arrows are commonly studied by marketing researchers, as exemplified by the multitude of studies on advertising effects on beliefs, attitude, feelings.

The even numbered arrows represent consumers' (both cognitive-affective and behavioral) impact on the tangible and intangible environment, ranging from micro to macro. Arrows 2 and 4 represent the direct impact of consumer behavior on the tangible and intangible environment (the operative mode). A consumer purchasing and replanting a tree commonly improves the environment, while lumbering practices may degrade it. Although the tangible environment comprises more than the natural, physical environ-

ment, consumer–environment interactions represented by arrow 2 often fall under the term "green marketing". A customer who complains loudly in a restaurant has a negative impact on the moral of the service personnel (the social environment), and is illustrated by arrow 4. Arrows 6 and 8 represent cognitive "impacts" on the tangible and intangible environment (the interpretive mode). Research on environmental cognition and on the internal representation of external environments (Moore, 1987) falls in this category. In this interaction, the consumer actively interprets the environment to form images on the basis of her goals, values and experience. People make internal representations of their external environment, which are often a more powerful source of influence on behavior than the actual environment is (Kaufman et al., 1966; Kaplan et al., 1989).

The borders between the consumer and the environment are less sharp as may seem the case at first hand. Research on the extended self of the consumer indicates that consumers may consider particular external objects such as personal clothing, collections, pieces of art and less profound items like food or softdrinks as part of their self (Belk, 1988). In such cases, the self extends beyond the nucleus to include part of the spheres around the consumer, thereby extending the internal. A reverse process takes place when consumers make internal representations of their external environments, thereby internalizing the external. Koffka (1935) already distinguished the geographic environment from the behavioral environment, and Lewin (1946) discussed the psychological environment.

The arrows labelled "A" and "B" depict interactions between cognition and behavior. A tremendous amount of work has been carried out by researchers in marketing on these interactions. To a large extent, the A–B interaction covers the study of attitude–behavior relationships, and more generally research on the relationships between the cognitive, affective and conative components of consumer functioning. As the environment (either tangible or intangible, and from micro to macro) is not directly involved in this interaction, it will not be dealt with here.

**4. Focus of the special issue**

This special issue of the *International Journal of Research in Marketing* focuses on the interactions between consumers and the tangible environment of any scale (micro, meso, macro) as described in the model in Fig. 1 by arrows 1, 2, 7 and 8. This focus is chosen for several reasons. First, it is an area of consumer-environment interaction that has attracted relatively few research efforts. Second, it is an important area with growing interest. And third, new valuable insight has been gained recently in this section of the model, as the findings of the articles in this issue prove.

Five articles representing an array of different kinds of consumer-environment interactions on the physical-tangible side of the model, have been chosen for the special issue. The articles are presented in Fig. 3, located in the relevant part of the consumer-environment interaction model.

The articles have been placed in the model as to the scale of the environment they are addressing and as to the type of interaction they are focusing on: behavior and/or cognition impacting the physical-tangible environment or the physical-tangible environment impacting behavior and/or cognition.

Dhruv Grewal and Julie Baker's paper "Do Retail Store Environmental Factors Affect Consumer's Price Acceptability?: An Empirical Example" is a naturalistic experiment using a small retail store (a card and gift shop) setting. The intent of this study is to determine whether or not and to what degree the quality of a store's interior design has an impact on customer's willingness to pay a higher price. Accordingly, it is placed at the meso level of the environmental scale in Fig. 3. As willingness to pay is the dependent variable, rather than customers' actual purchase behaviors, the study is located at the environment-cognition interaction.

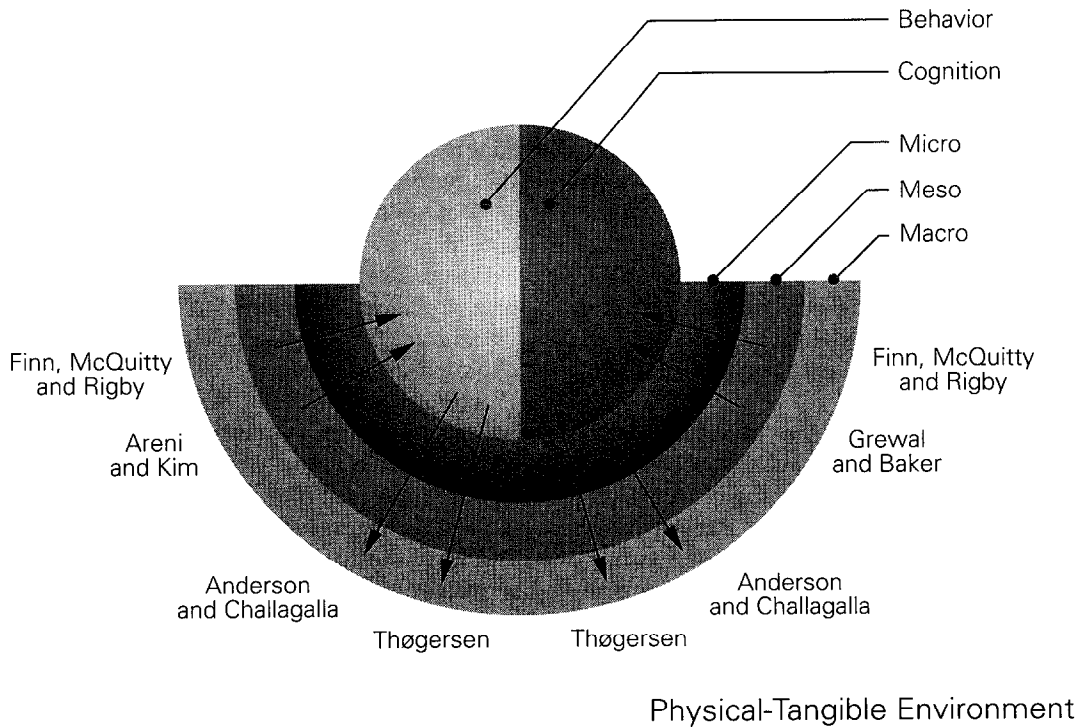


Fig. 3. Position of the articles.

Charles Areni and David Kim's work concerns "The Influence of In-Store Lighting on Consumers' Examination of Merchandise in a Wine Store". Based on vision and arousal theory they develop hypotheses about the effects of lighting on consumer behavior, that are tested in a field experiment. The independent variable is degree of lighting, while the dependent variables in their study are the manipulations of merchandise by customers, and the amount of money and time they spent. Hence, the study is placed at the micro/meso level of the environmental scale, at the environment-behavior interaction.

The contribution by Adam Finn, Shaun McQuitty and John Rigby, "Residents' Acceptance and Use of a Mega-Multi-Mall: West Edmonton Mall Evidence" assesses the impact of the world's largest mall on both the attitudes and behaviors of the citizens of Edmonton. Although most of the research focuses on the residents actual use of the mall, survey research assesses other issues, such as their reactions to the mall versus other shopping options. Thus the reason for placing the study high on the meso scale of the environment both on the environment-cognition interaction and on the behavior-environment interaction sides of the model.

John Thøgersen, in his article "A Model of Recycling Behavior: With Evidence from Danish Source Separation Programs" describes a framework for assessing a variety of community recycling programs. The author looks at consumer beliefs about the environment, the resulting attitudes toward participating in recycling programs, and at the actual recycling behaviors. Thus placement on the macro environmental scale, at the environment-cognition and behavior-environment interaction in Fig. 3.

The article that deals with the largest scale environment is "The Negative Legacy of Consumption" by Wilton Thomas Anderson and Goutam Challagalla. The authors point out that the term "consumption" is basically a negative concept that means to destroy, squander and waste. Through examples of "counterstream cultures" they show that certain consumptive attitudes and behaviors can impact the environment in a positive way. This contribution is accordingly

placed on both the cognitive and the behavior side of Fig. 3 and at the largest scale macro environment.

## 5. Future research focus

An examination of the consumer-environment interaction model and the articles of this special issue reveals the potential breadth of research and application possibilities that fall under the title "consumer behavior and the environment". The research potential of just a few of the interactions are examined within the context of the three scales of the consumer environment.

Consumer researchers have traditionally been concerned with the interaction between consumers and the micro environment. Researchers have given a significant amount of attention to the cognitive and affective reactions to marketing stimuli, but have underresearched the manner in which consumers physically interact with the marketing environment, i.e., the way consumers actually interact with products and advertising. Partly this situation is due to the emphasis on surveys and laboratory research. These research methods don't allow researchers to fully capture the essence of many behaviors that are intimately tied to particular environments. Behavioral observational methods as developed in environmental psychology (Barker, 1990) and interpretive methods (Sherry, 1991) could increase our knowledge of what consumers do with products in particular settings, and what the products and settings do to the consumers (Fuhrer, 1990). Recent research that has been performed in the context of the Consumer Behavior Odyssey (see, e.g., Belk, 1991) exemplifies the richness and relevance of this aspect of consumer-environment interaction. Arrow 2 in Fig. 2, the operative mode of consumer-environment interaction, needs increased research attention at the micro level.

A number of researchers have explored the impact of aspects of the meso environment on consumer behavior, with Donovan and Rossiter's (1982) study on the effects of store atmospherics on consumers as a landmark. However, in com-

parison to micro-environmental research, much less is known about the ways consumers interact with meso-environments, like shops, shopping malls and shopping areas. As past research has been limited primarily to explorations of one or at best two isolated specific aspects of the meso environment (for instance music (Milliman, 1982) and color (Bellizi et al., 1983)), relatively little is known about the effect of more global configurations of aspects in the meso-environment, and about the interactions between specific aspects of the meso environment.<sup>2</sup> Little is known about the dimensions that consumers use in evaluating aspects of the environment. For instance, it may be that psychological dimensions like the perceived “openness or smoothness” of an environment affect the preference for environments more than physical attributes do (see Kaplan et al., 1989). Surprisingly little is known in the academic field about the impact of various design elements (e.g., aisle configurations) of stores and larger scale environments on shopping behavior, and about the manner in which consumers physically interact with various elements in the shopping environment (Sherry, 1991; Belk, 1991). More research is clearly in place here. Arrows 2 and 6, the interpretive and operative modes of consumer–environment interaction, need increased research attention at the meso level.

Marketers are commonly faced with the task of attracting consumers to macro environments such as cities, residential neighborhoods and resort areas. Given the pervasive effects of these large scale environments on the daily lives of consumers, one would expect to find a significant amount of research investigating consumer–environment interactions at the macro scale. Again, surprisingly little research has been done in this domain. This is likely due to the dominance of certain research methods in marketing (laboratory studies and surveys, instead of e.g., observation and interpretive methods), to the academic disciplines from which many marketing and consumer researchers are traditionally recruited

(economics and psychology, instead of sociology, geography, anthropology) (Sherry, 1991), and to the type of organizations that employ practicing marketers and consumer researchers (goods firms, instead of, e.g., government agencies). Perhaps the tide is changing for research with respect to the macro level of the consumer–environment interaction. As the competition between communities, counties and countries for scarce financial resources is increasing (Kotler et al., 1993), and as the natural macro environment is increasingly stressed by traditional production and consumption activities, the marketing discipline will be asked to provide insight in how consumers and environments interact, and how their impact can be influenced, predicted and explained. Future research can build on the insight provided by the articles in this special issue of the *International Journal of Research in Marketing*.

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<sup>2</sup> Meryl Gardner made a similar point recently (see Eroglu and Machleit, 1993).



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