

# Does clothing have a code?

## Empirical findings and theoretical implications in the study of clothing as a means of communication

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### Introduction

#### *The clothing–language comparison*

This paper examines the long standing suggestion that clothing has language-like properties by investigating two hypotheses: (1) clothing as a means of communication relies on a 'code', and (2) the clothing code is not uniformly known in the community that uses it. Research results are reported that confirm both of these hypotheses. These findings demonstrate that clothing communication is indeed informed by a code and that the knowledge of this code depends upon the social location of the individual and the social characteristics of the particular clothing look. The relevance of these findings for theory development in the fields of product symbolism, information processing, and attribution studies, and several product categories is noted. Finally, the paper presents a research instrument, the 'graduated photo-sort' method, that may prove useful in the future investigation of product symbolism and the communicative properties of material culture.

Clothing is recognized as a medium of communication that expresses a range of social information (see, e.g., Adams, 1973; Bogatyrev, 1971; Cordwell and Schwarz, 1979; Holman, 1979; Lauer and Lauer, 1981; Roach and Eicher, 1965; Rosenfeld and Plax, 1977; Sproles, 1985). Its expressive quality has led some to suggest that clothing resembles language (see Barthes, 1967, p. 25; Holman, 1980b; Lurie, 1981; Messing, 1960, p. 558; Nash, 1977, p. 173; Neich, 1982, p. 214; Sahlin, 1976, p. 179; Turner, 1969, p. 50). As with any good metaphor, the comparison of clothing and language encourages us to entertain unsuspected similarities. It invites us to ask which of the properties of language are also the properties of clothing. For instance, does an act of clothing communication involve the transmission of a 'message' between an 'addressor' and 'addressee' in a particular 'context' according to a particular 'code' through a particular 'contact' (Jakobson, 1960, p. 353)? Can we speak of clothing communication as having 'referential', 'emotive', 'conative', 'poetic', 'pathic', and 'metalingual' functions (Jakobson, 1960, p. 357)? These are some of the questions that the metaphor brings to light. The present paper examines only one of them. It reports research undertaken to help determine whether clothing, like

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language, depends on a 'code' when it serves as a means of communication.

The term 'code' is here defined as the knowledge that must be shared by the addressor and addressee of a clothing message in order for the former to create this message and the latter to understand it. The term and the concept 'code' has achieved general currency in the social sciences and the humanities in the study of linguistic and nonlinguistic communication (see, e.g., Culler, 1975; Dyer, 1982; Fiske, 1982; Hawkes, 1977; Jakobson, 1971b; Krampen, 1979). The term is, as Jakobson (1971c; p. 718) points out, roughly comparable to the terms 'langue' (de Saussure, 1966) and 'competence' (Chomsky, 1968; cf. Culler, 1975, pp. 8–10). A code specifies significant entities and the rules by which these entities are selected and combined in the construction of a message (Eco, 1976, p. 90; Jakobson, 1971d, p. 241). Benveniste, referring to language proper, describes the contribution of code to communication in the following way:

“... since language ... functions according to the rules of a code, the speaker can, with a very small number of basic elements, compose signs, then groups of signs, and finally an unlimited number of utterances, all identifiable for the hearer because the same system exists in him.” (Benveniste, 1971, p. 21)

More particularly, the focus of the study is the syntactical aspect of the code. This aspect concerns “the relations of signs to one another without reference to the meanings or users of the signs” (Singer, 1984, p. 24; cf. Eco, 1976, p. 36; Mertz, 1985; Morris, 1938, p. 7; Peirce, 1932). Our concern is therefore with the internal relations of signs within the code, and not with what these signs stand for (the semantic aspect), or the functions they perform in the context of a particular speech event (the pragmatic aspect).

The communicative properties of consumer goods have been the object of recent research. For instance, it has been observed that houses, cars, cigarettes, liquor and other 'high-in-

volvement' goods are capable of transmitting a full range of information about the owner's demographic and lifestyle status (see Belk, Mayer and Bahn, 1981; Durgee, 1986; Hirschman, 1980; Holman, 1980a,c; Kehret-Ward and Yalch, 1984; Levy, 1959; Sellerberg, 1976; Sommers, 1963).

This research suggests that there are several outstanding issues in this area. For instance, Holman's review of the literature concludes that there has been “little programmatic research ... on the communicative properties of products”. She also notes that the “theoretical development of the topic is minimal” (Holman, 1980a, p. 106). Some work has appeared in the last few years (see, e.g., Gottdiener, 1985; McCracken, 1986, 1988; Mick, 1986) to remedy this deficit, but theoretical formulations remain few, and largely untested. Furthermore, Belk, Mayer and Bahn (1981, p. 523) point out that of the research done on encoding and decoding, it is the latter, decoding, that has received less attention. Finally, as Mick (1986, p. 207) notes, the semiotic study of meaning and codes does not restrict inquiry to qualitative methods alone. Quantitative techniques and the experimental method must be made part of the larger enterprise of meaning research. In this event, however, it is necessary to cultivate the 'discovery procedures' (i.e., research instrument) that will allow us to glimpse the internal operations of codes and the meaning they generate (Culler, 1975, pp. 20–24).

This paper seeks to respond to all of these observations. It seeks to examine the communicative properties of one product category, clothing, and to do so in a way that contributes to the empirical foundation and theoretical development of the field of product communication. It also treats 'decoding' activity in particular and to this extent seeks to redress the imbalance noted by Belk, Mayer and Bahn. Finally, it suggests a discovery procedure, here called the 'graduated photo-sort' method, that permits the unam-

biguous and uncomplicated collection of quantitative data that reveals the kind and degree of code knowledge.

The object of the research reported here, then, was to determine whether one product category, clothing, has language-like properties, and by implication, whether the clothing–language comparison is a suitable model for the investigation of the expressive character of this and other product categories.

### *Hypotheses*

The research project this paper reports began with the following general hypothesis.

**Hypothesis 1.** *Clothing interpretation is informed by a code.*

In order to test this hypothesis, a number of assumptions were made. First, it was supposed that evidence of any consistent pattern of agreement in the interpretation of clothing looks could be taken as evidence of a shared code. When individuals agree with one another in the significance they attach to clothing looks, they give evidence of a common set of standards according to which ‘decoding’ takes place. The virtue of testing such a hypothesis is that it would help to confirm the wisdom of a ‘language–clothing’ comparison and encourage the use of this metaphor as a guide to research. On the other hand, disagreement, or more exactly, a random pattern of response within the community, could be taken as evidence of the absence of a code. The failure to reject the null hypothesis would encourage the conclusion that the expressive properties of clothing are perhaps better investigated according to another model.

The second hypothesis presupposed the confirmation of the first.

**Hypothesis 2.** *If a code exists, the code that informs clothing interpretation is not uniformly known.*

This expectation was encouraged by preliminary research conducted in 1983 by the

first author (McCracken, 1985), as well as research results in the study of language (Bernstein, 1974; Schatzman and Strauss, 1955). The supposition here was that if clothing communication was indeed informed by a code, it is reasonable to expect an uneven distribution of knowledge of the code in the population.

This second hypothesis appeared to admit of the following internal differentiation.

**Hypothesis 2a.** *All members of the community possess greater knowledge of some parts of the code than other parts of the code.*

In this case, it was supposed that certain of the looks would be better known or more intelligible than other looks.

**Hypothesis 2b.** *Some members of the community possess greater knowledge of the entire code than other members.*

In this case, it was supposed that certain members of the community are the masters of the entire code and consistently outperform other members of the community in any and all interpretive tasks.

**Hypothesis 2c.** *Some members of the community possess greater knowledge of one particular part of the code than other members of the community.*

Here, it was supposed that certain members of the community are the masters of parts of the code and out-perform other members of the community in some but not all interpretive tasks.

These three sub-hypotheses allow for the possibility that the code that informs the interpretive activity of this community is not uniformly distributed. They predict that some groups will demonstrate a better over-all knowledge of the code than other groups, and that some groups have better knowledge of

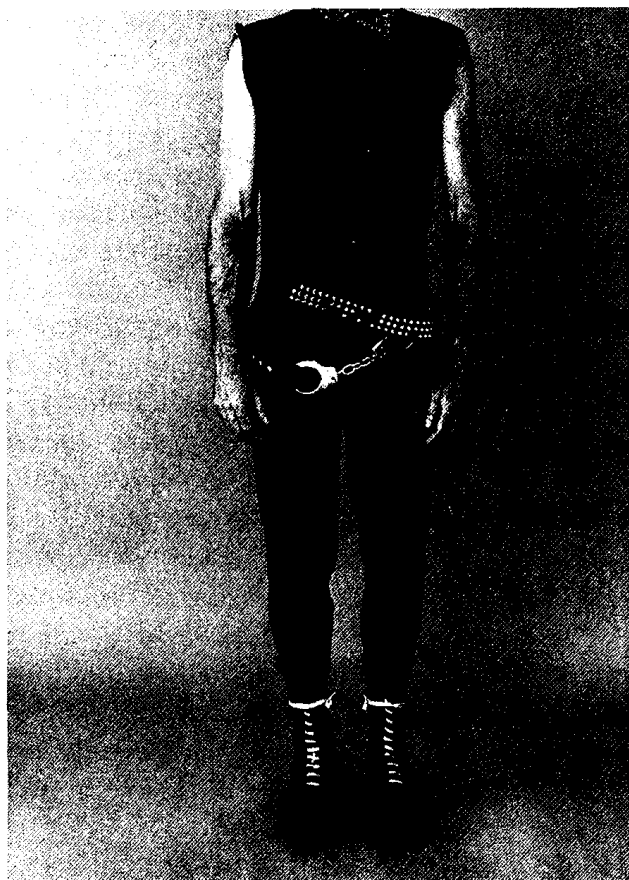


Fig. 1.

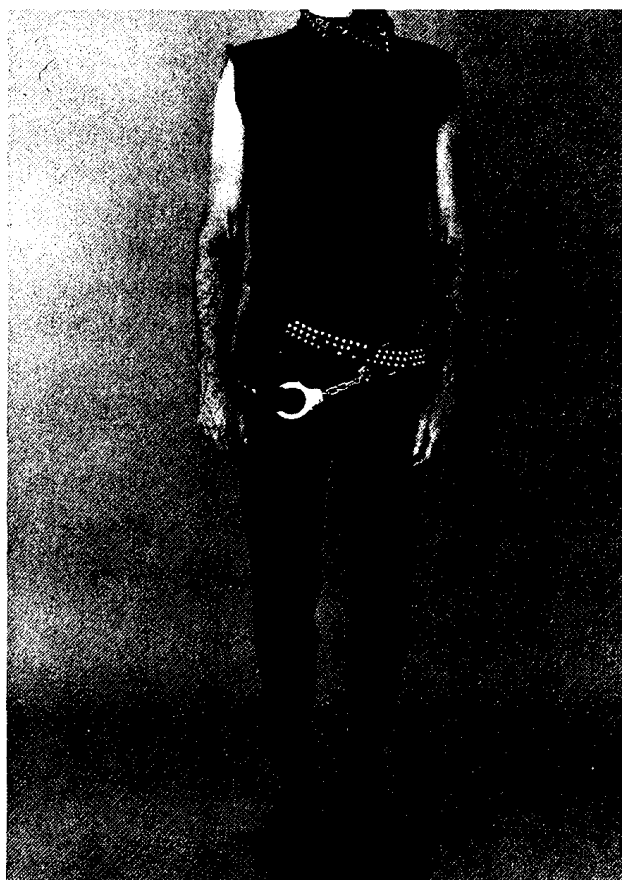


Fig. 2.

one particular part (i.e., one particular clothing 'look') of the code, or the code in its entirety.

In sum, the research project examined the proposition that clothing is language-like when it serves as a means of communication. It searched for support of the contention that clothing possesses a code. In the event of positive confirmation of the existence of a code, a further attempt was then to be made to see whether some individuals exercised greater mastery of this code than others.

## Method

The study of the code from the syntactic point of view used in this study has a special methodological advantage. It permits a relatively simple and unambiguous discovery pro-

cedure and research instrument. We shall refer to this as the 'graduated photo-sort' method for ease of reference in the remainder of the paper.

This method makes it possible to test for the presence of a code by offering the respondent a range of test of test stimuli that include 'well-formed' messages (legitimate products of the code) and 'badly-formed' ones (illegitimate products of the code.) It also makes it possible to examine the syntagmatic aspects of the codes without ever once asking about the semantic meanings of the messages. Those respondents who can accurately perform this simple choice task and identify the well-formed messages can safely be said to know the code, and those who are unable to make this identification can safely be said not to know it. The method also makes it easy to offer the respondent a range of clothing com-

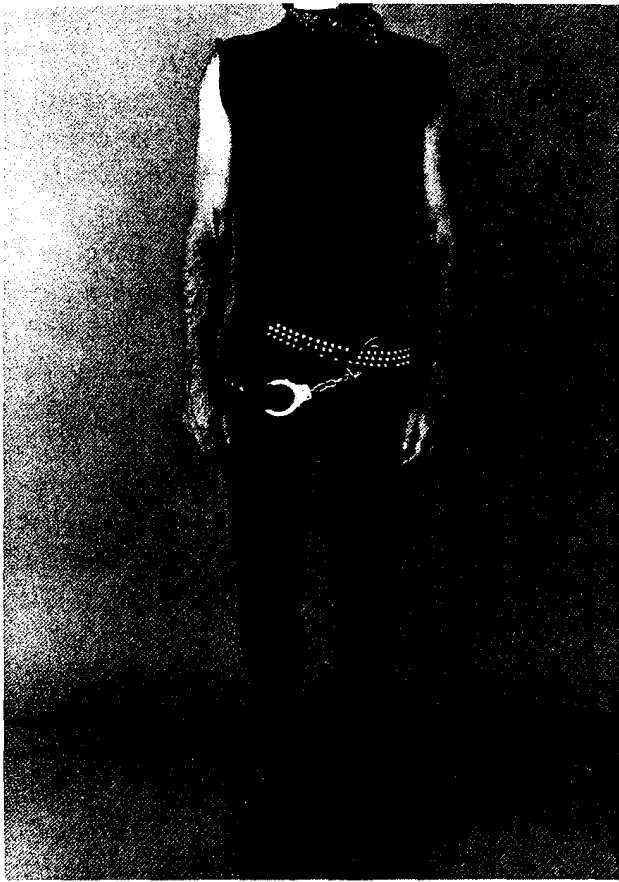


Fig. 3.

binations that display *degrees* of 'well-formedness'. Those respondents who can accurately identify these degrees of well-formedness display, in the process, the degree of their knowledge of the code. In sum, the 'graduated photo-sort' method allows us to concentrate on the syntactical aspect of the code, and investigate the existence and nature of the code with a straightforward, easily administered test that generates quantitative data.

The 'graduated photo-sort' consisted, in this case, of a set of five photographs (a set of these photographs is presented here as Figs. 1–5). The first photograph in the set was a 'prompt' photograph. It was a 'well-formed' version of the code. The remaining four photographs in the set each represented a carefully calibrated departure from the well-formed prompt photograph. The second photograph shows a variation that was virtually

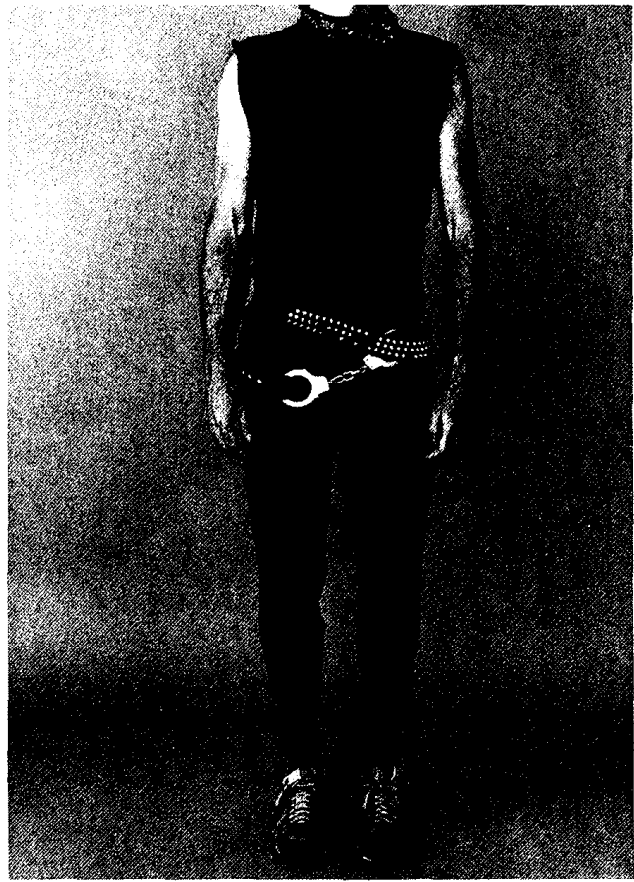


Fig. 4.

the same. The second a slightly wrong or 'ill-formed' variation. The third an obviously wrong variation. The last photograph represented an outlandishly wrong version of the well-formed photograph. The stimuli was designed, in this way, to represent well-formed messages and a range of ill-formed ones, so that the subject could demonstrate whether and how well s/he knew the clothing code.

More particularly, the research instrument was designed to accomplish three things. The first objective as to obtain from subjects selections from range of choices so that any patterns of consistency, or randomness, in response would become manifest. The second was to obtain from them selections from a range of more or less correct choices so that the degree of accuracy of response would become manifest. ('Accuracy' is here defined as a relative term that refers to the skew of responses towards the correct end of response



Fig. 5.

set.) The third was to obtain from subjects selections from a range of clothing looks so that the location of accuracy (or error) would become manifest. The looks selected for the project, the internal variations created for each look, and the photographs in which they were presented, are all treated in greater detail in the next section.

### *Experimental variables*

The six looks represented in the color photographs were the following: 'punk', 'preppie', 'new romantic', 'suburban leisure', 'lounge wear', and 'heavy metal'. The look presented in Figs. 1–5 is the 'punk' look.<sup>1</sup> These looks are identified by name for ease of reference

<sup>1</sup> This set of photographs has been reproduced here in black-and-white. In each photograph, a different type of shoe is shown.

only. At no point in the research did we identify the photographic stimuli by these or any other names. Furthermore, these looks were identified and assembled as common assemblages, and not according to an a priori set of lifestyle or fashion designations. Looks were selected in order to capture some of the diversity of clothing practice in modern North America. Table 1 shows how they are meant to represent the key dimensions of fashionableness, expense, and centrality. These dimensions appeared to represent a limited set of discrete and powerful criteria capable of generating much of the variation that now exists in the world of North American fashion. It is not suggested, however, that these dimensions are necessarily the only or the crucial ones. They were used here for purposes of provisional classification only.

It will be noted that this selection leaves two cells empty in the  $2 \times 2 \times 2$  Table 1. These cells were excluded to eliminate the complexity and the duration of instrument response. These two cells were chosen for exclusion on quite different grounds. The cell that was not fashionable, expensive and not mainstream, appeared to have no readily obvious representative look, and was therefore easy to eliminate. The one that was mainstream, not fashionable, and expensive was eliminated for the opposite reason. In this case, the best example appeared to be the business suit, an instance of clothing that is too highly visible and well known to serve as a useful discriminator.

### *Levels of experimental variables*

For each of these looks, the photo-sort method called for five variations. These variations were controlled by leaving all aspects of look unchanged except one. The first photograph presented the look in its 'well-formed' version. This was the 'prompt' photograph. For the second photograph, a substitution was made for one article of clothing, thus

Table 1  
Dimensions of contrast for clothing looks

	Mainstream		Not mainstream	
	Fashionable	Not fashionable	Fashionable	Not fashionable
Expensive	Preppie	X <sup>a</sup>	New romantic	X <sup>a</sup>
Inexpensive	Lounge wear	Suburban leisure	Punk	Heavy metal

<sup>a</sup> X = unrepresented category.

creating the first departure from the prompt. For example, for the 'punk' look shown in Figs. 1–5, the substituted item were the shoes, and the choice of substitute shoes was a pair

of heavy black boots that were very like the 'Doc Martin' originals. For the third photograph in the 'punk' look, still greater departure from the well-formed prompt was created

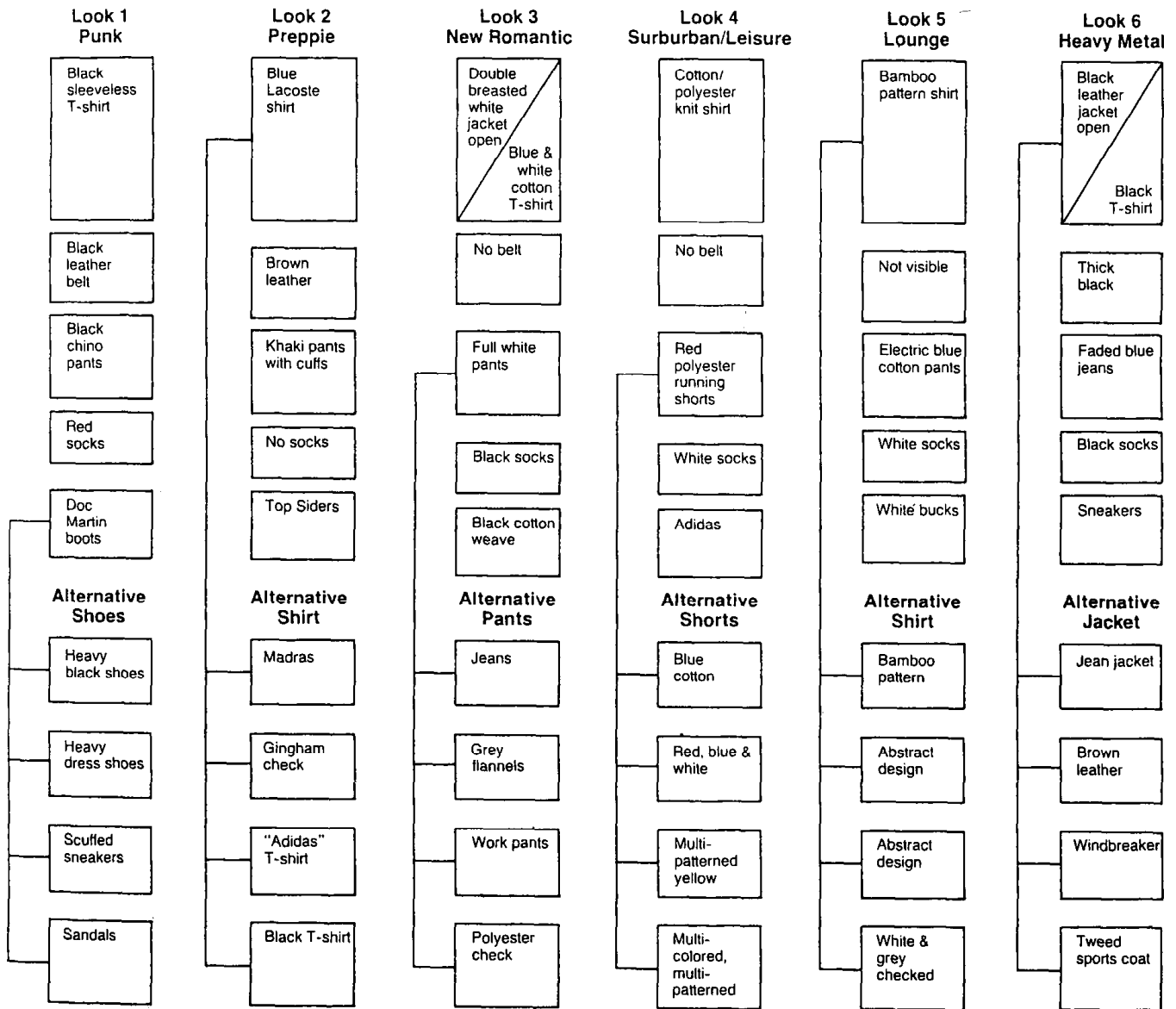


Fig. 6.

by choosing a pair of hard leather dress shoes. For the fourth photograph in this series, the shoes were changed to a pair of scuffed sneakers, and for the fifth to a pair of sandals and socks. Fig. 6 gives the substitutions that were made for the remaining five looks. It will be noted that a different article of clothing was chosen for each look. This was done in order to be able to manipulate the most critical element in each clothing look. Expert judges helped to determine what this element was for each look.

Clothing versions were selected with the advice of 'expert' authorities: individuals who belonged to the social group which subscribed to the look in question. These individuals were recruited from personal networks (i.e., friends, and friends of friends), from on-the-street contacts (i.e., 'cold' contact with individuals who wore the look in question) and, in the case of the 'suburban leisure' and the 'lounge wear' looks, from the sales staff of retail outlets that specialize in these looks.

There were at least three judges per look. They were asked to identify the 'prompt' look and the five variations on this look in uniform stages of departure from the look. Judges were instructed to create clothes for the photo-set by choosing the most usual article of clothing for the prompt and the most outrageous exception for photograph #5. They were then asked to choose the intermediate photographs (#2-4) so that they filled in the gap between #1 and #5 at equal intervals. Clothing was purchased on the basis of this advice and the photographs created. Inter-judge reliability was determined through informal consultation between the experts. We required that all of the experts for each look agree with one another entirely before the selection was made. The experts were drawn from the local populace and their difficulty in serving as experts for all of the looks is itself some indication of the differences that exist between the looks. No experts claimed that any of these looks were overlapping or synon-

ymous. Expertise was measured through informal discussion of a range of clothing stimuli. Experts evidenced a reluctance to judge other looks, and placed low confidence in their ability to judge those looks. We took this reluctance to be an accurate indication of the range of their competence in this matter. In the best of all words, we would have had experts perform systematic evaluations across the looks in order to create a correlation matrix. Given the uncertainty of experts, however, this did not seem well advised. We also dismissed the use of non-experts on the grounds that the consensus of this group would be distorted by the presence of those who did not know the look.

The use of several experts in the construction of the stimuli creates a problem for the interpretation of results. It is possible that these results reflect differences in the range of the experimental stimuli, instead of differences in knowledge of the code. Results should be considered with this caveat in mind.

### *Experimental stimuli*

Following the observations of Holbrook and Moore (1981), the experimental stimuli judged most appropriate for these experimental purposes were photographs. These photographs were taken by a professional photographer in his studio. Conditions of setting and light were identical for each photograph. The background for each photograph was a featureless gray sheet. The same model (male) was used in each of the 30 photographs, which allowed for control of body shape and posture. Photographs of this model were taken from the neck down so that facial features and expression were eliminated. Clothing was selected with attention to consistencies of quality, condition and price for each look.

### *Subjects*

The method of subjects recruitment should be noted both for its real advantages and



potential disadvantages as a technique for recruitment. All the data for this study were collected from 360 subjects. The sample has the following characteristics:

*Gender:* female: 45.6%; male: 54.4%.

*Age:* 17–21: 18%; 22–26: 20.6%; 27–31: 17.7%; 32–36: 7.4%; 37–41: 8.9%; 42–46: 8.5%; 47–51: 6%; 52 + : 12%.

*Occupation:* blue collar: 17.4%; white collar: 24.1%; professional: 20.7%; student: 24.4%; retired: 2.5%; unemployed: 4.5%; other: 6.5%.

*Marital status:* married: 50.8%; single: 43.0%; separated: 2.8%; divorced: 2.8%; widowed: 0.6%.

*Education:* grade school: 3.1%; some high school: 8.7%; high school: 29.9%; some university: 11.3%; university or college: 38.9%; masters: 5.4%; Ph.D.: 2.8%.

*Offspring:* 0 children: 53.4%, 1: 10.4%; 2: 16.6%; 3: 9.3%; 4: 6.7%; 5: 2.2%; 6: 1.1%; 7: 0.3%.

All subjects evaluated each look. Subjects were interviewed while they attended the Red Cross Blood Donation Bank in Guelph, Ontario, Canada. In Canada, blood donorship is a voluntary, unpaid and popular activity in which a large and heterogeneous group of people participate.

It must be asked, however, whether there is some characteristic common to Red Cross donors that limits their value for the present research project. Does such a group fail to represent the larger population in matters of knowledge of the clothing code? Burnett (1981) reports that American donors tend to be low in self-esteem, low risk takers, high in health concern, politically conservative and religious. The Canadian sample is a much more representative across age, class and lifestyles categories, and therefore much less likely to exhibit these uniformities.

#### *Experimental procedure*

The photographs were introduced to subjects in the following manner. They were given

the first photograph of the 'prompt' photograph and told: 'Here is the picture of a man dressed in a particular way.' They were then given the remaining four photographs in random order and told: 'Here are four more pictures of the same man, dressed in the same way, except that in each case his shirt/shoes/pants/shorts/coat is/are different. I want you to choose the photograph that shows the shirt/shoes/pants/shorts/coat this man is most likely to have in his wardrobe.' It is worth emphasizing that clothing looks were never referred to by name by the interviewer. Once the subject had selected one photograph from the four, he or she was asked the same question and prompted to make another selection from the remaining three photographs. This process of selection continued until the subject had organized the five photographs of the set into a series that ranged from the first 'prompt' or 'benchmark' photograph through the remaining four photographs in order of their supposed resemblance to this benchmark photograph. The looks presented each time in the following order: punk, preppie, new romantic, suburban leisure, lounge wear, and heavy metal. This presentation order was preserved for all respondents. There is no reason to think that a learning effect took place, and indeed no relationship was found between the order of presentation and the results. Once the subjects had completed this test, the interviewer recorded the order of the selections. The test was repeated for each of the six looks. On the completion of all six tests, subjects were then asked to provide information on their occupation, sex, age, marital status, and number of children.

#### *The dependent variables and analysis procedure*

All the subjects completed the assigned ordering tasks for each look within apparent difficulty. The output from the task was a rank order of perceived 'correctness' of four photographs relative to the benchmark photo-

graph. A possible 4! orders could result from the ranking activity, each look admitting of 24 possible combinations.

The five photographs for each look were numbered 1–2, 3, 4, 5 on the basis of expert opinion. This was labeled the most correct combination of the possibilities. The 23 remaining combinations were arranged along the continuum of correctness, those closer to 1–2, 3, 4, 5 being judged as more correct than those closer to 1–5, 4, 3, 2. The 24 combinations were thus ranked in order of correctness according to this ‘stepwise’ decision rule: a combination will be judged as more correct than another combination when it has a lower number in the same column, beginning with the columns on the left. Thus, the combination 1–3245 was judged more correct than the combination 1–4235. We were, in other words, attempting to see that an error in the most correct look was weighted more heavily than an error for any other look, and the correctness in these other looks could not compensate for this initial error.

This stepwise decision rule meant that the correctness of the first choice was by far the most important in demonstrating knowledge of the look. The first picture chosen determined the overall order of correctness. In this scheme, the act of ranking that selected picture #2 as its first choice was regarded as more correct than the one that selected picture #3. Although different compensatory decision rules could have been used here, it was difficult to quantify importance weights for misrankings objectively. This, as well as the noncompensatory nature of the judgments, prompted us to use a noncompensatory decision rule.

For the initial analysis to establish evidence of a code, these categories were collapsed to twelve categories by grouping the first two categories and the following pairs into combined categories that are the same on the first two rankings but differ on the less important last two rankings. This aggregation

on the least important differences in the ranking results was done to simplify the presentation of results. The collapsing of the response categories should not increase the likelihood of rejecting the null hypothesis.

Categories were collapsed from 24 to 12 in order to reduce the number of categories for ease of analysis in using the chi-squared technique. The technique. The collapsing was done on the least important difference and hence should have had minimal effect on the results. The only possible consequence of this strategy is to reduce the likelihood of the null hypothesis being rejected, making the test more, not less, conservative.

To test the knowledge of looks (or that a code exists) a test of non-randomness was needed. At the most general level, absence of a code would be evidenced by a random response pattern. We would expect to find equal responses in each category (a rectangular distribution). To test this, a chi-squared test with the expected value of equal responses in each category was used to determine if significant differences from randomness existed. In addition, the shape of the distribution would indicate the direction and extent to which the aggregate responses vary from equiprobability.

In order to determine if differences exist across demographic segments in the ability to read the code, it was necessary to determine if differences existed in the central tendency of correctness. The use of this form of segmentation in consumer research has been called into question. Andreasen and Belk (1980) have argued that attitude and lifestyle are better predictors than socioeconomic variables, and Hirschman and Holbrook (1984) have advocated the use of subcultures as the basis of segmentation in hedonic research. Our choice of a demographic basis for segmentation follows from the introductory nature of this study, and the confidence that, whatever other factors are at work, demographic factors would be active ones.

It was hypothesized that different members of the population would have varying degrees of clothing codes. Four demographic variables that were expected to influence the knowledge of the clothing codes—age, sex, occupation and the number of offspring—were used to test the hypothesis that differences in knowledge of the codes exist. The correlational nature of this study made regression analysis the appropriate technique. The hypothesis was tested using stepwise regression analysis (setting the stopping rule for the last variable to enter the regression at a significance level of  $p < 0.1$ ). The use of a relatively liberal alpha of 0.1 for the  $t$ -tests on the regression coefficients was not considered unreasonable for an exploratory study. As Andreasen and Belk (1980) noted, this type of regression analysis is appropriate when a high correlation exists for two of the independent variables, as is the case in this study (i.e., age and offspring correlate at  $r = 0.67$  and several other variations have moderate correlations).

For these analytic purposes we have returned to the original 24 categories of correctness for the dependent variable. These categories were assumed to be appropriately equal in interval. We acknowledge that this assumption cannot be made with certainty. But it should also be observed that Kerlinger (1979) argues that ordinal measurement is for statistical purposes best treated as interval measurement. Further, it appears that, for some inferential statistics, gross inequality in the intervals of measurement has little effect. Baker, Hardyck and Petrinovich (1966) found that nonequal measurement had no effect on the number of  $t$ -tests reaching significance. Our conclusion, finally, was that although regression assumes an interval dependent variable, the  $t$ -test should be robust to violations of the interval assumption.

Also, the distribution of the dependent variable being definitely skewed to the left and hence violating the normality assumption of the dependent variable, it has been shown

that the  $F$ -test is very robust to violations of normality (Winer, 1971). Analysis was also run with a square root transformation. Statistical significance tests of these also had the same null hypothesis rejection, indicating that no differences in inference occurred due to the violation of the normality assumption. Since transformation to data have adverse consequences for interpretability, the descriptive results are presented for the untransformed rankings (Neter and Wasserman, 1974).

## Results

The results for the first hypothesis were relatively unambiguous. The data indicate that, within this sample, interpretive efforts conform to a highly systematic pattern. The data show a high rate of agreement within the sample. In addition, the chi-squared statistic rejects the null hypothesis that all response patterns are equally probable, both for all the looks taken together, and each look taken individually. Within this community, individuals agree in their interpretations of all clothing looks much more often than they disagree. Furthermore, this agreement clusters towards 'correct' interpretation as this was defined by the research project and its instrument. In short, the distribution of the data describes a declining probability distribution as distance increases from the 'correct' response to the instrument. The histogram in Table 2 gives a graphic representation of this relationship. This is an aggregated histogram and summarizes responses for all six looks.

The interpretive efforts of this community are evidently highly uniform. The randomness that would have suggested a random reading of clothing variations and the absence of a code is nowhere in evidence. Instead, there is a strong evidence of high agreement in interpretation and, to this extent, strong evidence of the presence of a code.

Table 2  
Subject accuracy by looks

Look	High					Accuracy						Low	Total response	Chi square	df.	Significance
	1	2	3	4	5	6	7	8	9	10	11					
Heavy metal	152	73	39	38	33	3	2	14	1	3	1	1	360	745	11	$p < 0.00$
Suburban leisure	122	45	115	15	7	4	5	8	5	22	4	8	360	668	11	$p < 0.00$
Lounge wear	120	15	49	111	25	5	6	5	7	8	3	6	360	665	11	$p < 0.00$
Punk	73	165	31	2	4	3	42	10	15	4	1	10	360	837	11	$p < 0.00$
Preppie	72	39	12	99	46	6	30	27	18	4	1	6	360	346	11	$p < 0.00$
New romantic	48	72	28	16	35	12	37	34	11	15	12	40	360	120	11	$p < 0.00$
Overall	587	409	274	281	150	33	122	98	57	56	22	71	2160	1879	11	$p < 0.00$

The data also appear to support the second hypothesis and the suggestion that there are variations in the mastery of the clothing code. The sample showed systematic variation in their interpretations of the clothing looks presented them.

#### Results for Hypothesis 2a

For Hypothesis 2a it was supposed that all members of the community would know certain parts of the code better than they knew other parts of the code. This can be put another way. Certain parts of the code, in the form of individual 'looks', were more 'readable' or 'intelligible' than other parts of the code. The looks are reviewed here in order of this intelligibility.

The data suggest that the best-known look in this community is the 'heavy metal' look. Some 152 of 358 subjects (42.5%) scored within the first of 12 possible response categories. This distribution is represented in the histogram presented in Table 2. This demonstrates a highly skewed distribution. Most of the responses appear at the 'correct' end of the horizontal axis and tail off rapidly as one moves towards the 'incorrect' end of this axis.

The second most readable look was the 'suburban leisure' look. In this case, 34% of the subjects fell within the first of 12 possible response categories. This distribution is represented in Table 2 as well. Here, too, one sees a highly skewed distribution, with strong clustering at the correct end of the axis. The peak

is, however, less pronounced than the one exhibited for the 'heavy metal' look.

Nearly identical in its readability was the 'loungewear' look. In this sample, 33.5% scored high. This is to say that 33.5% qualified for inclusion in the response set because they sorted the photographs for this look perfectly or almost perfectly (i.e., they made no errors in the photo-sort except for the last two photograph in the series). This response was roughly comparable to the one given for the 'suburban leisure' look. However, this distribution, represented in Table 2, is flatter and wider. The 'punk' look proved highly intelligible to only 20.4% if one restricts oneself to the first response category only. This represents a dramatic reduction in 'readability'. However, it will be noted that when one considers the first and second response categories (Table 2), this proportion increases to 66.5%. This is an anomalous finding for which no ready explanation presents itself.

The fifth, 'preppie', look proved accessible to a group of roughly similar size (20.1%), but its distribution (Table 2) is markedly flatter than that exhibited for the 'punk' look.

The 'new romantic' look was least readable and accessible only to 11.7% percent of this sample. It will also be noted that the distribution (Table 2) here is flatter still.

These results suggest several explanations. It will be noted that the most readable or best known of the looks were the inexpensive ones. The first four most readable are also the four

looks that appear to be least expensive. Breaking this group of four down, we see that the two more readable looks in this down-scale group, the heavy metal and the suburban, are also those that qualify as fashion-non sensitive and the two less readable looks are fashion-sensitive. This suggests that not only are the inexpensive looks more readable than the expensive ones, but also that unfashionable looks are more readable than fashionable ones. By these principles, the least readable of the looks, the 'preppie' and 'new romantic' ones, should be and are expensive and fashionable. Interestingly, the mainstream-marginal dimension proves a useful discriminator here at the very top and the very bottom of the scale. The most readable look, the 'heavy metal' look, besides being inexpensive and unfashionable, also proves to be marginal while the least readable look, the 'new romantic' look, besides being expensive and fashionable, proves to be marginal as well.

The 'heavy metal' look is an enduring fixture in this community. The fact that it is inexpensive makes it more ubiquitous than it might otherwise be. The fact that it is not fashion-sensitive means that it has been an enduring presence in the community. The fact that it is marginal means that it is popular among young people. Popularity among the young makes it especially frequent but what is more important is that it makes it especially visible insofar as young people are themselves especially visible in town centers such as the town square and shopping malls. Finally, there is a deliberate menace to this clothing look. It suggests the toughness and even hostility of the wearer. This gives the look a certain conspicuousness. It draws attention to itself and demands the scrutiny (and perhaps also the avoidance) of non-wearers. In short, the number and kind of people who wear this look as well as the relatively static nature and visibility of this look combine to make a look well known to the community.

The 'suburban leisure' look also enjoys the advantage of having a great many wearers. It, too, is relatively immune to fashion changes and this makes it a longstanding presence in the community. While it is not marginal (and does not draw attention to itself), its mainstream nature gives it many wearers and relatively high visibility.

The 'lounge wear' look is mainstream, fashionable and relatively inexpensive. Its fashionability makes it a less enduring presence in the community and it has relatively few viewers. On both these counts, it does not have a high profile. On the other hand, it is mainstream and relatively conspicuous, and this saves it from complete obscurity.

The 'punk' look enjoys a certain notoriety by virtue of its marginality and fashionability and the fact that it has been adopted by some young people who cultivate a menacing public persona. Still, the fact that it is fashionable and relatively new means that it has not yet achieved the profile and recognition value of the 'heavy metal' look.

The 'preppie' look suffers obscurity for two reasons. It is fashionable and it is expensive. Increasingly, this look has entered into the mainstream but it has not yet trickled-down sufficiently in this community to enjoy high recognition.

The 'new romantic' look is still more obscure because it is the most fashion-sensitive and recent of the looks included. This recency combined with its marginality make it the least recognizable part of the code.

### *Results for Hypothesis 2b*

It was also posited that some members of the community possess greater knowledge of the entire code than other members. This section considers the demographic characteristics of those who exhibited a high degree of accuracy in their reading of all the looks.

Taking all of the looks together, the variables of 'sex', 'age', and 'number of offspring'

proved to be the ones along which differential knowledge of the code distributes itself. For the variable of sex, females were significantly better than men in reading the looks ( $p < 0.01$ ). For the variable of age, younger people were moderately better in reading the looks than the older people ( $p < 0.01$ ). For the offspring variable, those without children were significantly better in reading the looks than those with children ( $p < 0.1$ ). Differences in occupation are not statistically significant.

These variables can be judged in combination. For instance, the variables of 'age' and 'sex', when seen in combination, suggest that

men are, on the average, worse than women in their ability to read looks. However, the ability of both sexes deteriorates at a consistent rate so that even while women are better than men, a younger man will be better than an older woman. This relationship is presented in Table 3.

The variables of 'age' and 'offspring' may also be seen in combination. When individuals are young, the presence of children has a large negative effect on their knowledge of the clothing code. However, older respondents are proportionally less influenced by the effect of offspring. At 45 or more years of age, it has a minimal effect (see Table 3).

The variable of 'sex' and 'offspring' seen in combination suggest that both men and women with children are less skillful in their reading ability than men and women without children but, interestingly, men without children are nearly as skillful as women with children (see Table 3).

These results also finds ready explanation. The young are more active and constant seekers of clothing information. They have recently been called upon to make their own choices of what to wear, and they have endured the hypersensitivity to fashion and clothing that group membership in adolescence often creates. Older individuals are less preoccupied with this hypersensitivity, and the need to declare new or changing group membership. Information gathering and decision-making in this area become less frequent.

The greater code knowledge of women is also unsurprising. Women have traditionally been more sensitive to the subtleties of communication in language and the nonlinguistic media. They are also encouraged by gender definition in modern North America to pay special attention to clothing while men by the same definition are positively discouraged from doing so.

The effect of offspring on code knowledge suggests that the strenuous demands of

Table 3  
Results for stepwise regressions

Dependent variable (multiple R)	Independent variables	B coefficient	t-value
Correctness all looks $R = 0.20$ $p < 0.00$	Age	0.06	4.11 <sup>a</sup>
	Sex	-1.01	-3.56 <sup>a</sup>
	Offspring	0.61	1.61 <sup>c</sup>
	Constant	4.92	10.99 <sup>a</sup>
Correctness heavy metal look $R = 0.18$ $p < 0.00$	Occupation	1.25	2.09 <sup>b</sup>
	Offspring	1.02	2.07 <sup>b</sup>
	Constant	3.66	10.80 <sup>a</sup>
Correctness suburban leisure look $R = 0.39$ $p < 0.00$	Age	0.17	6.70 <sup>a</sup>
	Sex	-1.17	-1.85 <sup>c</sup>
	Constant	0.83	0.89
Correctness lounge wear look $R = 0.33$ N.S.	-	-	-
Correctness punk look $R = 0.34$ $p < 0.00$	Age	0.15	6.26 <sup>a</sup>
	Constant	0.97	1.15
Correctness preppie look $R = 0.15$ $p < 0.03$	Age	0.04	1.61 <sup>c</sup>
	Sex	-1.12	-1.85 <sup>c</sup>
	Constant	6.99	7.78 <sup>a</sup>
Correctness new romantic look $R = 0.29$ $p < 0.00$	Sex	-3.73	-4.36 <sup>a</sup>
	Offspring	1.68	1.97 <sup>b</sup>
	Constant	11.39	16.35 <sup>a</sup>

<sup>a</sup> Significant at 0.01 level.

<sup>b</sup> Significant at 0.05 level.

<sup>c</sup> Significant at 0.1 level.

child-rearing, especially within young families, tends to diminish the individual's knowledge of the code. These demands appear to reduce the individual's exposure to the information and activities from which he or she once drew this knowledge. The results also suggest, however, that as children age and parents are able to return to their information gathering activities, the presence of children becomes a positive boon to code-knowledge. As children begin their own information gathering and clothing choices, their parents suddenly come into possession of a new (and sometimes exasperating) source of code information.

### *Results for Hypothesis 2c*

Finally, Hypothesis 2c held that some members of the community possess greater knowledge of one particular part of the code than other members of the community.

For the 'heavy metal' look, both offspring and occupation proved significant, both at  $p < 0.05$ . For occupation, blue collar workers proved least skillful in reading this look, especially if they have children (see Table 3). White-collar workers, on the other hand, proved most skillful. The variables of sex and age are not significantly different. It is worth noting that this is the best understood of all the looks.

It is not clear why blue-collar workers should have such limited knowledge of a look that is known so well to so many. It seems unlikely that this look is unknown to the children of this group. Furthermore, it is surprising that women, normally more sophisticated in knowledge of the code, should evidence no special ability here.

For the 'suburban leisure' look, age and sex proved significant at  $p < 0.01$  and  $p < 0.1$ , respectively. Differences in occupation and offspring are not statistically significant. Younger subjects were able to read this look much better than older ones. Male and female

subjects showed the usual discrepancy, with women more skilled than men (see Table 3).

For the 'lounge wear' look, there was no difference across the variables.

For the 'punk' look, age proved significant ( $p < 0.01$ ). Differences in offspring, sex and occupation were not statistically significant. Older individuals have dramatically more modest skill in this regard (see Table 3).

For the 'preppie' look, sex and age proved to be the significant variables (both at  $p < 0.1$ ). Women are much better than men at reading this look. Also younger subjects were slightly better at reading the look (see Table 3). There is no statistically significant difference in offspring and occupation.

For the 'new romantic' look, sex and offspring proved to be the significant variables ( $p < 0.01$ ,  $p < 0.05$ ). Differences in occupation and age are not statistically different. Women were much better than men, but it will be noted that the overall knowledge level here is very low. Also, subjects without children were much better at reading the look (see Table 3).

### **Conclusions**

These results suggest that there is indeed a code that informs the efforts of individuals to interpret the clothing they see around them. They suggest furthermore that the knowledge of this code depends, first, on the social location of the individual and, second, on the social characteristics of the clothing 'look' or message in question. The individual is likely to know more about the code when female, young and childless. This social location gives the individual greater concern for, interest in, and access to code information. Second, the individual is more likely to know more about parts of the code that concern mainstream, unfashionable and inexpensive clothing. These social characteristics of the clothing look make it more accessible, conspicuous and interesting to the individual. In short, there is a

striking inconsistency to the distribution to the clothing code. Apparently, a great many individuals are systematically ignorant of several of the looks that are inscribed in this system of communication.

The uneven distribution of knowledge of the clothing code would appear to distinguish it from language proper, for which the distribution of code knowledge is more even. But, this difference should perhaps not surprise us. Language speakers are subject to a process of constant formal and informal instruction in the use of language. State agencies such as the school and media influences such as television, radio, newspapers and magazines disseminate a stream of code information along with their factual information. Clothing readers, on the other hand, are not the recipients of this kind or depth of instruction in the code of clothing. Certainly, they have access to the 'fashion' press and its very partial treatment of a small part of the clothing universe. Also, they are able to consult friends and family. Both of these sources of information are necessarily partial, unsystematic and more an exercise in the limitations of one's social world than an opportunity to transcend them.

Second, language speakers are constantly engaged in 'encoding' a wide range of messages with this code. Users of the clothing code, on the other hand, encode only the messages called for the their own age, gender, status and lifestyle (a very small part of the overall code indeed).

Third, users of the language code are constantly using the 'metalingual' capacity (Jakobson, 1960, p. 356) of which the language is capable to get information about parts of the code that are not clear to them. They can, in other words, use the code of language to solicit more information about the code itself (e.g., "what do you mean by the word *x*"). The clothing code has no meta-capacity; it cannot be used to talk about itself. There is no formal reason why the code

of language should not be used to serve this 'glossing' function, but it turns out that there are only very special speech conditions in which one clothing wearer can ask another about the meaning of their outfit. (There are indeed a greater many public occasions on which such a question would be taken an admission of mental distress.)

As a result of the deficiency of the clothing code and the social convention that prohibits certain kinds of fact-gathering, it is difficult for the individual to gather information about the clothing code. Interestingly, the metalingual function of language permits the speech community to check constantly meanings and interpretations and in this way to diminish the built-up of discrepant versions of the code—what Bakhtin (1981, p. 270) called 'heteroglossia'. Clothing, deprived of such a capacity and the assistance of language, must let differences of meaning go unexamined and code divergences unchecked. It is worth acknowledging here that the language does allow small pockets of special, restricted meanings in the form of slang, colloquial speech. But, note that these exist, as it were, at the edge of the discourse, not as we have seen here in the case of clothing at the very heart of communication.

Fourth, it appears to be the case the limits of what Silverstein (1976, pp. 16–17) calls 'meta-semantic awareness' in the language code are much less confining than in the clothing code. Because individuals have access to a meta-lingual function, they can be accustomed to and skilled at giving an account of the meaning of the linguistic materials they use. Clothing-wearers, on the other hand, can experience real difficulty in giving an account of the meaning of their own clothing, let alone the clothing of others. It is apparently more difficult for the individual to 'surface' clothing meanings than linguistic ones.

Finally, the knowledge of some parts of the clothing code can be affected by the cost and fashionableness of clothing articles. The poor



or isolated individual may find his or her access to the code information these articles represent made more difficult. There is some evidence to suppose that the individual's social location can affect language code knowledge in just this way (Bernstein, 1974; Schatzman and Strauss, 1955), but it is difficult to see how factors such as cost and fashionableness by themselves can determine the mastery of the language code. When consumer goods serve as signs, the powerful pragmatic considerations of the market place must affect their meaning in ways that language has rarely felt (Agrest and Gandelonas, 1977, p. 101; Krampen, 1979; Mick, 1986).

These are some of the ways in which language and clothing differ as codes of communication. It appears that the clothing wearer has much more limited access to knowledge of the clothing code than the language user has to the language code. They simply have less instruction in the code. They have less opportunity to use it. They have no ready means to discuss its meaning and they have greater difficulty in doing so. In the absence of this instruction, use, glossing and experience, their knowledge of the clothing code must come from their own opportunities for observation and their own powers of inference. If they are older, male and a parent, their opportunities of observation are limited and powers of inference perhaps diminished. If the clothing messages are not mainstream, unfashionable and inexpensive, opportunities for observation are still further limited. In short, the clothing reader's knowledge of the code is much more contingent than that of the language speaker. Knowledge of the code will therefore depend on one's location in society and the characteristics of the message to which one is exposed. There appears to be a compelling reason, then, why there is much greater variation in code mastery than is the case for language.

These conclusions allow the present paper to respond to Holman's call for theory devel-

opment in the area of product symbolism. They allow us both to confirm and to caution against the present tendency to take account of the expressive aspects of products by comparing them to language. At least with regard to the notion of a 'code', there seem to be good grounds for supposing that clothing and perhaps other media of communication depend upon a shared body of knowledge and that communication assumes to this extent a systematic character. These findings confirm the wisdom of the language-product comparison and suggest the next step in the study of product symbolism: the determination of what these codes are. On the other hand, this work also suggests that there are modest but important differences between language and products as means of communication. The knowledge of a code may have more uneven distributions for products than it does for language. Here, the metaphor does not hold and, to this extent, its heuristic value is diminished. This suggests that when products are investigated as means of communication, care must be taken to establish the communicative properties that are peculiar to products. We must be prepared to see the differences between language and products as means of communication even as we establish their similarities. This careful assessment of similarity and differences represents no more than the judicious use of the 'product as language' metaphor for heuristic purposes. This may be the most promising path of theory development.

Earlier work by the first author of this paper came to the same conclusion by a different route (McCracken, 1985). This earlier work suggests that there may be as many differences as similarities between language and clothing as systems of communication, and that these differences have important implications for the theory used to take account of nonlinguistic phenomena. It was argued that nonlinguistic systems of communication do not fully use the principle of combination

so important to language proper, and as a result they produce messages that are much more limited in number and almost 'prefabricated' in nature (cf. Holman, 1980b; Jakobson, 1971a). The present paper adds another dimension to this contrast. It suggests that the distribution of the code by which these systems of communication operate may not be uniform and that the users of the code are, therefore, not always full participants in the process of communication.

Taken together, these differences suggest that the heuristic metaphor that compares language and clothing or other product categories must be used with caution and that we must be prepared to find systematic differences between them. Theory development in this area will depend in part on a precise appreciation of just what these differences are.

Let us look at the implications of this study for cognate studies in the field of consumer behavior. First, in the area of information search, a great deal of the work now being done in the area of information processing and decision-making attends exclusively to the information search and processing activity that the individual devotes to products he or she intends to purchase. However, individuals also engage constantly in the gathering of information about the product choices of other people. (This is indeed a kind of obligation for anyone who lives in a society that depends upon the successful interaction of individuals who are perfect strangers and must therefore rely on external cues, as Belk (1984, p. 775) and Sahlins (1976, p. 203) note.) In spite of the depth and frequency of this information search activity, it has largely been ignored by the consumer research community. This neglect is especially problematical when it is noted that the individual's product choices are partly determined by his or her perception of the choices of others (see Levy, 1981; McCracken, 1986; Kehret-Ward and Yalch, 1984). When the study of this category

of information seeking is taken more seriously, it will be of some value to know that its character is shaped by the social location of the individual and the social characteristics of the product message.

A second implication has to do with the relevance of this study to attribution studies in the social sciences in general and consumer behavior in particular. It can be argued that the attribution process is intimately connected to nonlinguistic codes of communication. What the 'attributor' uses as the basis for an attribution is often a message generated by a code. Presently, the systematic qualities of the code are largely ignored in the attribution research community. The attributions made by individuals are rarely considered in connection with the message on which these attributions rest, the code that generated the messages, or just how the social location of the individual and the social characteristics of the individuals affected the process of communication and attribution. The present study suggests that there are important variables that affect the attribution process when this process relies on a communicative activity and a shared code.

#### *Future research*

It must be acknowledged that these results may well be context-dependent, and will change as studies of other populations take place. It is also worth pointing out that a study of this kind might wish to examine lifestyle as well as demographic variables. The degree of fashion involvement may also be a pertinent variable. Our concern was to test theory and to concentrate on simpler factors before moving on to more complicated and less obvious ones.

As it is now constituted, this research project suggests four lines along which further research might be done. The first line of potential research follows from the point

above. It is to determine whether a different method of segmentation might help to identify the distribution of code knowledge, or even explain the anomalies noted for Hypothesis 2c. A finer set of demographic distinctions, and the addition of a lifestyle variable, might both prove useful. The second line is the investigation of the anomalous findings for Hypothesis 2c. These anomalies suggest that there is something at work here that may discourage the use of the 'code' concept in the study of the expressive properties of clothing. A third line of research is the investigation of the semantic aspects of the code. How is knowledge of the *meanings* of the clothing code distributed? Where do they diverge? The fourth line of research is to compare the nature of the code that informs clothing symbolism to ones that inform other instances of product symbolism. Does the clothing code have the same properties and distribution as the ones that inform communication through houses, furnishings, cars and other product categories?

It must be acknowledged that not all product categories serve as identical means of communication and that the conclusions of this study of clothing may or may not apply to the study of cars, houses and other product categories. It is likely, however, that certain broad similarities exist across these categories and that some of the results of this study will find application beyond the study of clothing paper. Just how the product categories differ in their communicative properties is indeed a question of some interest to the field, and it is hoped that this study will help encouraging comparative research.

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