

## Some experimental studies of familiarity and liking\*

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What is aesthetically pleasing and why? The answers to this question have immense practical implications for people such as advertisers, educators and broadcasters, as well as great theoretical importance for researchers in the social sciences. The question can be approached from a variety of different viewpoints; the sociologist, for example, might concentrate upon the role of social class or the mass media in shaping people's likes and dislikes, and the anthropologist might undertake cross-cultural comparisons. In the absence of any consistent body of theory on aesthetic preferences in any of these other disciplines, the approach of the experimental psychologist has been to collect data on human preferences in a systematic manner and to develop a theory which is congruent with the empirical findings. Our own attempts at this have developed along new lines, and therefore there is no closely related literature to be surveyed alongside our own work. However, some observations about the historical background of our studies will be useful at the outset.

The 19th-century experimental aesthetics ran into difficulty in its endeavour to establish a body of consistent data (Boring, 1957); and so its theories, although very interesting, remained speculative. Thus, aesthetics continued to be on the fringe of psychology (Mace, 1962) until the birth of so-called new experimental aesthetics a decade or so ago. Berlyne (1974) showed new ways forward along experimental paths; and he also tried to root aesthetics in biology (Berlyne, 1971). In the meanwhile Zajonc (1968) drew attention to the effects of *mere exposure* on human likes and dislikes. This left out important factors influencing favourability, such as stimulus complexity, orderliness and discriminability, and many other stimulus characteristics. Thus, Zajonc's particular attack on the problem of what is pleasing was on a narrow front; and probably because of its narrowness the attack proved fruitful, and it seemed to augur well for the future. Our own approach to data gathering and theory building in the field of aesthetics stemmed likewise from the studies of *exposure learning* of preferences (Sluckin, 1964); and the approach could also be described as being biologically rooted in a broad sense.

To be more specific with regard to the last point, it is interesting to note that the question as to when

mere exposure will increase preference and when it will decrease preference applies in much the same way to human beings and to non-human mammals (Hill, 1978). Neophobia, or wariness of the unknown, is characteristic of both animals and man. Exposure to new inanimate objects gradually results in their acceptance; this developing favourability may be regarded as 'learned safety' (Hill, 1978). Further exposure will lead to a decline in favourability; this is said to be associated with 'satiation'. The ubiquitous inverted-U curve of liking as a function of familiarity (Sluckin, Colman & Hargreaves, 1980) well summarizes observed responses in both animal and human subjects. The effects of exposure to social stimuli also show certain cross-species similarities. It would be feasible to focus attention on the comparative psychology of preferences broadly described as aesthetics. We shall not, however, attempt to do it as this would sidetrack us from the main purposes of this paper, which are to bring out the special features of our own studies of human likes and dislikes, to summarize the findings which we have been reporting in various journals over a number of years, and to outline some new perspectives in experimental aesthetics.

### The question of method

The theme running through most of our research has been the relationship between the *familiarity* of objects and people's liking for them, and we have used standard experimental techniques in order to do this. Some of the stimuli we have used, such as letters and words, would perhaps not generally be regarded as appropriate for the study of aesthetic reactions; they are primarily 'laboratory' stimuli that are easy to manipulate and work with. Others, such as names and music, have clear ecological validity as aesthetic objects, and so our experimental procedure should approximate to real-life conditions.

In experimental studies of changes in aesthetic judgements, a tradition has developed of assessing preferences of subjects before *and* after exposing them to the chosen stimuli. We have, on the contrary, tested our subjects' preferences only *once*; and we have used stimuli with which our subjects would be familiar to varying degrees as a result of real-life experience. A single testing session is, of course, more convenient as an experimental procedure. Above all, real-life experience provides for a wider span of 'mere exposure' than do studies in which exposure is

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manipulated experimentally; so much so that in our work stimuli can range from those which are utterly unfamiliar to those which are very familiar indeed. As will be seen later, the inverted-U curve relating liking to familiarity manifests itself only under conditions of wide range of exposure; otherwise, seemingly contradictory results may be obtained, namely that favourability either increases or decreases with exposure. We have argued that, far from being conflicting, such results should be seen as complementary, and will be found in any situation, provided the subject's familiarity with the stimuli in question varies from extremely low to extremely high (Sluckin, Colman & Hargreaves, 1980).

A somewhat uncommon feature of experimental method adopted in some of our more recent studies has been the between-subjects, rather than the within-subjects, design; this design has, in fact, also been used by Harrison (1969) and by Moreland & Zajonc (1977). The method in question simply assigns subjects randomly *either* to a group rating stimuli for familiarity *or* to a group assessing stimuli on favourability. Thus, the drawback of the within-subjects design, whereby the subjects' judgements of any given stimulus familiarity or stimulus liking can mutually influence one another, is avoided.

A design feature which differentiates our work from most other studies in this field is the use of *subjective*, rather than objective, measures of familiarity. At first sight this might appear to be a disadvantage rather than an advantage. There is no question that preferences, as well as favourability ratings, are subjective judgements. Familiarity, however, poses a problem; here most studies have used objective measures based on duration of exposure. Yet, subjective measures of familiarity are more suitable for a number of reasons. They provide in practice a large variance in familiarity; they give a more direct indication of familiarity than such measures as word counts (word counts, when available, tend to be out of date and/or culturally biased); they also gauge separately the familiarity of each subject with each stimulus, whereas objective measures are based on averages. In any case, it is on record (Harrison, 1977) that subjective measures of familiarity, such as we have used, are better predictors of favourability than objective measures.

### Letters and words

So much for the main general features of our investigations. The more specific features will be apparent in relation to the series of studies which we shall now review, beginning with those concerning letters, syllables and words. An early investigation (Sluckin, Miller & Franklin, 1973) involved the use as stimuli of capital Roman-alphabet and Cyrillic-alphabet letters. The subjects were groups of five-year-old and ten-year-old children to whom these were simply fairly familiar or very familiar letters on the one hand, and

letter-like shapes on the other. The children's preferences were assessed by the pair-comparison method. It was found that the younger children strongly preferred the Roman-alphabet letters. Since the two sets of letters had been well matched for straight and curved line components, the only possible reason for the finding could have been that the preferred letters were the ones with which the children were familiar. This particular result was consistent with Zajonc's mere-exposure hypothesis. The older children also preferred the familiar shapes, but a good deal less so than the younger ones; this was the case even though the ten-year-olds had, of course, been exposed for a longer time to the letters than the five-year-olds. The conclusion from that study was that, in the given circumstances, liking was initially a direct function of exposure, but that extra exposure could lead to a reduction in liking. There was either less neophobia with increasing age or, quite possibly, there existed an inverted-U relationship between familiarity and favourability for ordinary letters of the alphabet.

A later study set out to investigate preferences for common words, uncommon words and nonsense words among young (6–7 yr) children, older (10–11 yr) children and young (18–20 yr) adults (Colman, Walley & Sluckin, 1975). In one of the experiments all the stimuli were consonant–vowel–consonant trigrams: words or non-words. In another experiment the stimuli were very common two-syllable words and relatively uncommon two-syllable words. In both experiments the pair-comparison procedure was again adopted to ascertain the subjects' preferences. In the first experiment all groups preferred words to nonsense syllables, that is familiar to strange stimuli. In the second experiment both groups of children preferred common to uncommon words, but young adults showed a significant preference for uncommon over common words. Figure 1 shows how to make sense of these results. Graphs have been drawn to connect appropriate points within the familiarity–favourability coordinates. Non-words have low scores on each dimension for both children and adults. Uncommon words are taken to be much less familiar

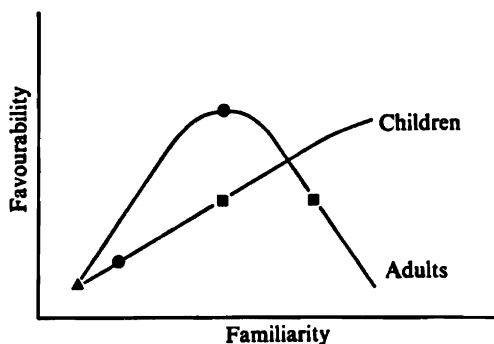
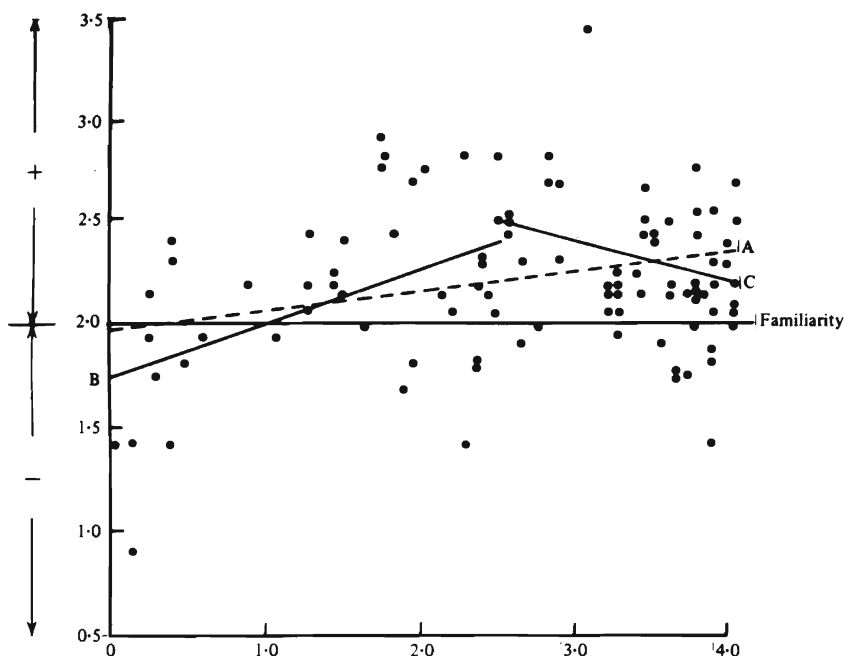


Figure 1. Preferences for ▲, non-words; ●, uncommon words; ■, common words. (See explanation in text.)



**Figure 2.** Scattergram of mean familiarity and favourability ratings for 100 words, with regression lines (A) for the whole sample, (B) for those words with familiarity < 2.5 and (C) for those words with familiarity > 2.5.

to children than to adults, and such words have been found to be much less attractive to children than to adults. Common words are, of course, familiar to children over the age of six and to adults; and they are considered to be on the rising section of the inverted-U curve in the case of children, but on the descending section of the curve in the case of adults.

A further study was subsequently conducted in a different way to investigate the likes and dislikes relating to words as a function of the experienced frequency of the occurrence of these words. Words which could be regarded as emotionally neutral were selected randomly from a dictionary. No assumptions were this time made about the familiarity of our subjects with the words. Instead the subjects, young or youngish adults, rated the familiarity of each of the 100 words on a five-point scale, while other, comparable subjects rated on a five-point scale the likability of each of the words; thus, the between-subjects design, mentioned earlier, was used in this experiment (Sluckin, Colman & Hargreaves, 1980). The results are set out in Figure 2. A straight line shows the fairly steep average *rise* of favourability for words up to the value of 2.5 chosen by inspection on the familiarity scale; thereafter, at higher levels of familiarity, there is a less steep *decline* of average favourability. In fact, our results turned out to conform to a theoretical inverted-U curve; the outcome can accommodate, or is consistent with, the 'mere exposure' predictions of Zajonc and his co-workers

(e.g. Zajonc, 1968) as well as the opposite-direction reports of such investigators as Cantor (e.g. Cantor, 1968).

At this stage we can no more than make suggestions about the parameters of the inverted-U curve. Generally, the peak of liking tends to occur earlier with objects which are subjectively simple, highly discriminable and predictable, and later with objects which are subjectively complex, poorly discriminable and unpredictable. As we have mentioned elsewhere (Colman & Sluckin, 1976), the former category seems to embrace things which have almost instant appeal but which soon become boring; in the latter category, liking develops more slowly but turns out to be more durable.

### Names and preference feedback

Having studied aesthetic responses to words, we decided next to investigate the likes and dislikes concerning, first, Christian names, and then, surnames. Names have the dual advantage of being easy to study in the laboratory, as well as possessing a considerable degree of psychological and social significance (see Colman, Hargreaves and Sluckin, 1981*b*). We had reason to believe that patterns of responses to Christian names and surnames would be distinctly different. It may be best, however, to start off by looking at the results of our investigations and only then turn to theoretical considerations. To anticipate

a later section of this paper, we may say now that the examination of likes and dislikes of Christian names will take us into the problem of fashions and cyclical vogues in the realm of aesthetic appreciation.

The different phases of the work on preferences for Christian names (sometimes referred to as first names or forenames) in relation to their experienced familiarity have been reported by Sluckin, Hargreaves & Colman (1979), by Hargreaves, Colman & Sluckin (1979) and by Colman, Hargreaves & Sluckin (1981a). In brief, 40 subjects in Australia and 40 comparable subjects in England rated their familiarity *either* with 100 randomly selected male Christian names *or* with 100 randomly selected female names; 40 further subjects in Australia and 40 in England rated their liking for the same male and female names. Significant high positive linear relationships between familiarity and favourability were found for male names and female names, whether judged by males or females, both in Australia and in England. For instance, the best-liked male names in England, such as David, Peter, Richard and John, were among the most familiar and commonly occurring names; and the least-liked names were among the least familiar ones.

We do not think that these linear correlations can be thought of simply as referring to the ascending sections of inverted-U curves. Our explanation is as follows. In the case of words, favourability is a function of their familiarity. In the case of Christian names the causal relationship is partly reversed: the best-liked names tend to be given more frequently to new-born infants, and so they are the ones that are the most familiar. This provides a self-regulating mechanism in naming practices; it ensures that no names are so frequently given as to bring about a decline in their favourability ratings. In other words, no single name can become so common as to get markedly disliked; although striking fluctuations in favourability and in familiarity do occur. We shall develop this theme further, immediately after reviewing our findings concerning surnames.

We were initially aware that the relationship between liking and familiarity for surnames might well turn out to be very different from that for Christian names, because surnames, unlike forenames, are not commonly chosen at will by people, or for people, who bear them. Thus — we thought — the correlation between familiarity and favourability for surnames could be curvilinear, of the inverted-U type, resembling the relationship we had previously found for words, ranging from very uncommon to very common. In our study (Colman, Sluckin & Hargreaves, 1981) we had a sample of 40 male and 40 female subjects, who rated either their familiarity with or their liking for 60 surnames selected randomly from a local telephone directory. One of us used in the same manner a further sample of 80 subjects in America; but unfortunately the raw data had been put into a holdall which was stolen in New York!

Anyway, the results we obtained in England were entirely clear: Smith and Brown — very common names — were not liked much; nor were such very unfamiliar names as Bamkin, Bodle, Nall or Codling. The best-liked surnames were in the middle range of familiarity, e.g. Shelley, Cassell or Burton. The paper by Colman, Sluckin & Hargreaves, cited above, provides an appropriate mathematical analysis of the inverted-U relationship between liking and familiarity which we found.

Returning now to the comparison between the forenames and surnames data, we must note first of all the distinction between two classes of naturally occurring stimuli. First there are those where the frequency of exposure depends largely on voluntary choice; examples are songs and tunes, clothes and shoes, and the like; forenames are also in this category. Second, there are stimuli where frequency of exposure is virtually beyond voluntary control; such stimuli are geometrical shapes, letters of the alphabet and words; surnames are essentially in that category.

Now some stimuli in our second category can become so common in a given culture that they are beyond, and below, the peak of favourability on the inverted-U curve. Some surnames, according to our findings, are in this position. On the other hand, stimuli in the first category appear to be prevented from reaching such high degrees of familiarity by virtue of the fact that voluntary choice can reduce the frequency of exposure of people to any particular stimulus which begins to decline in popularity. The result is an approximately straight-line relationship between familiarity and favourability, such as we found in the case of Christian names. The explanation we put forward has been referred to as the preference-feedback hypothesis (Colman, Sluckin & Hargreaves, 1981; Colman, Hargreaves & Sluckin, 1981b). This self-regulating mechanism, we suggest, is responsible for the fluctuations in popularity, or vogues, of Christian names, music, clothing styles, and the like.

### **Appreciation of music**

The layman might wonder whether likes and dislikes of letters, words or even names should come at all under the heading of aesthetics. He will not, however, question the statement that appreciation of music is an aesthetic experience *par excellence*. We have carried out some investigations of musical preferences; these can be thought of as exploratory steps in a surprisingly under-researched field. Hargreaves & Colman (1981) developed a system for the content analysis of aesthetic reactions to music which draws on some of the studies of 'types of apperception' that were carried out in the early part of this century (e.g. Myers, 1922). The reactions of a group of adult subjects, ranging from some with no musical training whatsoever to some with very high levels of training and performing experience, to 18 widely varied musical extracts, were categorized into six types using a modified grid technique. Full details of the findings

appear in the original report; broadly speaking, the main distinction to emerge was that between 'objective', technical reactions, which were more likely to come from musically experienced subjects, and 'subjective', personal reactions, more likely to arise in the musically more naïve.

Hargreaves, Messerschmidt & Rubert (1980) carried out a study incorporating a greater degree of experimental control than that mentioned above. The three variables that were systematically investigated were musical training of the listener, content of the piece (popular or classical) and listener's familiarity with the piece. This study differed from most others in the area in that the 54 undergraduate subjects made *evaluative* (quality) as well as *affective* (liking) ratings of each piece. Various clear-cut results emerged; perhaps the most interesting was that classical pieces received significantly higher ratings for quality, but not for liking, than popular pieces. The results were discussed in terms of the fragmentation between affective and cognitive components of attitudes towards music, and this distinction has important implications for explaining why people attend certain concerts and buy certain records.

### Some projected studies

The research on music described in the previous section falls outside the tradition of the rest of our work in that it deals with broader-based, cultural questions. We plan to continue with research in this vein, as well as to carry out further studies of stimuli such as names in the narrower tradition stemming initially from the biological approach. The main thrust of our future work, however, will involve a synthesis of these two approaches in applying the theoretical knowledge and methodology that we have developed in our work on the favourability—familiarity relationship to the study of musical stimulus materials.

Broadly speaking, we plan to undertake developmental studies of this relationship for stimuli such as tonal sequences, chord sequences and musical pieces. Since musical events are serially ordered in time, the problems we have discussed so far take on a new perspective, and the hypothesized inverted-U function can be reconceptualized in a variety of ways. This research should raise a new set of interesting theoretical and practical issues that should extend the scope of our work considerably; introducing the dimension of time, for example, has profound implications for the study of cyclical vogues and fashions. Cyclical vogues are very well known in music, and can be readily observed in experts' ratings of the works of the great composers (Farnsworth, 1969) as well as in the more rapid wax and wane of fashions in popular music and musicians.

It is rather surprising that this area of research has not received more attention from psychologists when there are major fields of interest such as music and art

education, broadcasting and programme planning, and fashion and advertising in which research findings could be applied. The active and extensive field of music education, for example, has recently been characterized by one of its leading British practitioners as badly lacking any rationale or conceptual framework (Swanwick, 1979). It is obviously desirable that classroom practice should be based on a sound, coherent body of theory, and we may be able to go some way towards providing it. Although experimental studies of the relationship between familiarity and liking may appear limited in scope, our review has shown that their implications can be far reaching. We are not suggesting, of course, that familiarity is the only factor that determines people's likes and dislikes. However, it is probably one of the most important factors, and its theoretical significance is enhanced by the absence of any other consistent conceptual framework in this field.

### References

- Berlyne, D. E. (1971). *Aesthetics and Psychobiology*. New York: Appleton-Century-Crofts.
- Berlyne, D. E. (ed.) (1974). *Studies in the New Experimental Aesthetics*. New York: Halsted Press.
- Boring, E. G. (1957). *A History of Experimental Psychology*. New York: Appleton-Century-Crofts.
- Cantor, G. N. (1968). Children's "like—dislike" ratings of familiarized and unfamiliarized visual stimuli. *Journal of Experimental Child Psychology*, **6**, 651—657.
- Colman, A. M., Hargreaves, D. J. & Sluckin, W. (1981a). Preferences for Christian names as a function of their experienced familiarity. *British Journal of Social Psychology*, **20**, 3—5.
- Colman, A. M., Hargreaves, D. J. & Sluckin, W. (1981b). Psychological factors affecting preferences for first names. *Names* (in press).
- Colman, A. M. & Sluckin, W. (1976). Everyday likes and dislikes; the psychology of human fancy. *New Society*, **38** (733), 123—125.
- Colman, A. M., Sluckin, W. & Hargreaves, D. J. (1981). The effect of familiarity on preferences for surnames. *British Journal of Psychology*, **72**, 363—369.
- Colman, A. M., Walley, M. & Sluckin, W. (1975). Preferences for common words, uncommon words and non-words by children and young adults. *British Journal of Psychology*, **66**, 481—486.
- Farnsworth, P. R. (1969). *The Social Psychology of Music*, 2nd ed. Ames: Iowa State University Press.
- Hargreaves, D. J. & Colman, A. M. (1981). The dimensions of aesthetic reactions to music. *Psychology of Music*, **9**, 15—20.
- Hargreaves, D. J., Colman, A. M. & Sluckin, W. (1979). Aesthetic preferences for names in relation to their experienced familiarity. II. England. *Melbourne Psychology Reports*, No. 59, 1—20.
- Hargreaves, D. J., Messerschmidt, P. & Rubert, C. (1980). Musical preference and evaluation. *Psychology of Music*, **8**, 13—18.
- Harrison, A. A. (1969). Exposure and popularity. *Journal of Personality*, **37**, 359—377.
- Harrison, A. A. (1977). Mere exposure. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*. New York: Academic Press.

- Hill, W. F. (1978). Effects of mere exposure on preferences in nonhuman mammals. *Psychological Bulletin*, **85**, 1177—1198.
- Mace, C. A. (1962). Psychology and aesthetics. *British Journal of Aesthetics*, **2**, 3—16.
- Moreland, R. L. & Zajonc, R. B. (1977). Is stimulus recognition a necessary condition for the occurrence of exposure effects? *Journal of Personality and Social Psychology*, **35**, 191—199.
- Myers, C. S. (1922). Individual differences in listening to music. *British Journal of Psychology*, **13**, 52—71.
- Sluckin, W. (1964). *Imprinting and Early Learning*. London: Methuen.
- Sluckin, W., Colman, A. M. & Hargreaves, D. J. (1980). Liking words as a function of the experienced frequency of their occurrence. *British Journal of Psychology*, **71**, 163—169.
- Sluckin, W., Hargreaves, D. J. & Colman, A. M. (1979). Aesthetic preferences for names in relation to their experienced familiarity. I. Australia. *Melbourne Psychology Reports*, No. 55, 1—18.
- Sluckin, W., Miller, L. B. & Franklin, H. (1973). The influence of stimulus familiarity/novelty on children's expressed preferences. *British Journal of Psychology*, **64**, 563—567.
- Swanwick, K. (1979). *A Basis for Music Education*. Slough: NFER.
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, **9**, *Monograph Supplement 2*, Part 2, 1—21.

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