

# MEASUREMENT SCALES IN CONSUMER SATISFACTION/DISSATISFACTION

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## ABSTRACT

In order to treat CS/D as a construct separate from attitude and other similar constructs, we must be able to measure it discretely. In fifteen years of CS/D research, many different measures and scales have been used to assess something called satisfaction. Inconsistencies in theory have led to inconsistencies in measurement which may be responsible for inconsistencies in reported results. This paper reviews over thirty measures which have been described in the literature. A taxonomy is developed that arrays the measures along two dimensions (1) cognitive, affective, conative concepts measured, and (2) verbal, graphic scale structure. Limited evidence regarding scale reliabilities is available. Construct validity is discussed in light of various concepts of satisfaction. Other reviews of CS/D measures have been selective, not exhaustive. The present paper provides a resource for those who wish to examine available measures and select the most appropriate. The ultimate goal is consensus theories and measures in CS/D.

## INTRODUCTION

Those who venture to comment on the current state of affairs in the marketing sciences are wont to bemoan the lack of consensus concerning methods, measures, and theories. Although marketing literatures are growing, they are still small when compared to longer-established disciplines. Yet, marketing scholars are well-served by the occasional pause to summarize progress to date.

Such self-appraisals can take many forms. Presented here is a review, with some criticism, of measurement techniques which have been attempted in the Consumer Satisfaction/Dissatisfaction and Complaining Behavior literature (CS/D & CB). The purpose of this review is threefold, (1) to provide a taxonomy by which measures can be categorized, (2) to provide a resource for researchers searching for an appropriate measuring device, and (3) to obviate the perceived need to create additional measures. The last of these purposes may prove to be the most useful in efforts to achieve consensus.

## THE NEED

There have been, periodically, calls for standardization and validation of scales in CS/D research (e.g., Woodruff, Cadotte and Jenkins 1983a). These echo similar laments in other literatures within and beyond the marketing discipline. A book-length response to the lack of consensus in attitude measurements still considered a classic in the field (Shaw and Wright 1967). This paper is intended to reflect the spirit of that effort.

The attitude literature is also of interest because of frequent confounds between attitude and satisfaction. If satisfaction and attitude are separate constructs at the same level of reduction, the two must be separable in definition and measurement. Ultimate testing of the construct validity of satisfaction can be conducted through assessment of convergence of claimed satisfaction

measures and divergence from attitude measures (Cook and Campbell 1979). Such an effort is beyond the scope of the present paper. Presented here is an array of measures that have, at one time or another, been claimed to assess CS/D.

CS/D has been defined as, "an emotional response manifested in feelings and is conceptually distinct from cognitive responses, brand affect and behavioral responses" (Day 1983, p. 113). Oliver (1980a; 1981) has proposed that CS/D is relatively short-lived and eventually decays into overall attitude. These viewpoints are consistent with a conceptualization that treats CS/D as a particular instantiation of a more general satisfaction construct (Hausknecht 1988).

## PREVIOUS REVIEWS

There have been prior efforts at reviewing and empirically comparing satisfaction measures in the CS/D literature. Hunt (1977a;b) commented on the discussions at the first two CS/D conferences and identified the need for a common measurement methodology as a key to deriving integrated CS/D theories. He seemed to favor verbal measures of behavioral intention as "a composite measure getting at all the influences affecting the decision without having to identify those influences . . . If a repeat purchase is intended, that says that all things considered, the purchase was critical enough that it has to be repeated and the choice was good enough that the respondent doesn't think any better choice is worth making." (1977b, p.39). Note that the use of behavioral intentions rather than actual behaviors as measures reduces concerns about influences external to the satisfaction situation that could modify behavior (Fishbein 1966; Fishbein and Ajzen 1975).

Westbrook and Oliver (1981; Oliver and Westbrook 1982) have compared empirically a number of the measures described here (the dimensions in the Figure are based, in part, on discriminations by these authors). From two analyses of pilot data they conclude (1) Likert, semantic differential and a composite verbal scale (corresponding to measures #22, #17 and #5 + #20b + #23 from the Figure, respectively) performed best on convergence versus divergence criteria; (2) discriminability of various scales seemed to be product class dependent (automobiles versus calculators); and (3) as a whole, the measures did not succeed very well in discriminating satisfaction from attitude. The first finding is encouraging for those who wish to identify measures which will be generally useful. The latter two findings threaten the universality of both the measures and theories of satisfaction.

The conclusions by Westbrook and Oliver are tempered greatly by their methodology and the ensuing discussion. Students were asked to give their present reaction to durables which they may have possessed for some time and with which they are likely to have varying histories of ownership and usage experience. It is not surprising, then, that the measures reflect some difference in response to product class and some confounding with

attitude. The authors allude to an explanation "satisfaction . . . is, in effect, a response to disconfirmation . . . and is expressed in affective terms . . . . In a sense, satisfaction may be seen as a disturbance acting on an attitude system" (1982, p.13). They go on to suggest that temporally distinct measures may help to separate satisfaction and attitude. Given Oliver's (1981) argument that satisfaction is likely to rapidly "decay" into attitude, it would seem that temporally distinct methodology would be necessary to uniquely identify the constructs. Similar problems arise in the use of measures of emotion as satisfaction measures in a later paper (Westbrook 1983).

Concerns about timing versus attitude formation have also been expressed outside the "mainstream" CS/D literature (Locker and Dunt 1978). In this review of British studies concerning the measurement of patient satisfaction with medical care, the authors identify many of the same techniques that are listed in the Figure. They also are concerned about the necessity of developing universal measures of satisfaction to allow for inter-study comparability. The interview technique seems to be much more prevalent in this literature, and the findings suggest that global evaluations exposed by direct measurement scales seriously mask the separate underlying attribute evaluations.

This argument returns us to the issue of reduction level mentioned previously. In order to be useful in theory testing, measures must be applicable at the same level of specificity as the operational theory. Locker and Dunt (1978) argue for examining various aspects of the patient's experience with medical care in order to explain his satisfaction, much the same as Wanous and Lawler (1972) examine the influence of various aspects of a job on job satisfaction. Although these are likely to be useful for understanding which factors influence satisfaction (maybe in a specific situation), it is less likely that a respondent will be able to discriminate the separate influences on an inventory of emotions such as that presented by Westbrook (1983) in order to build a "net" satisfaction. The final result of this may be that emotional measures will best reveal the presence and degree of satisfaction whereas evaluative measures will be more useful for explaining the cause of the feeling (i.e. it may be difficult to make emotional measures salient at more than one level in a given measurement situation). Even so, these measures should not be used without additional cautions. Miller (1977) argued that attempts to measure a process may actually impact on the process being studied. This problem of reactive measures and concomitant demand artifacts has been discussed elsewhere in consumer behavior (Sawyer 1975) but the arguments do not seem to have effected the design of less obtrusive measures (as suggested by Webb, Campbell, Schwartz, and Sechrest 1966; and Sechrest 1979). Sobel and McGuire (1977) have gone so far as to argue that disconfirmation (as the difference between expectations and perceptions--discussed here in a slightly different context) may be simply a measurement artifact.

The possibility of this, given current operationalizations of the satisfaction theory that has been presented, should not be overly discounted. Some authors have reported the necessity of forcing a satisfaction

response by eliminating the opportunity for neutrality (e.g. Day and Bodur 1979; Jordan and Leigh 1984). Although this may be viewed as forcing more careful responses, such a procedure can obscure important theoretical differences between a mild response and no response. For our purposes, it is important to note that the treatment of neutral options such as "Don't Know" or "Never Thought About It" has been shown to bias recall data (Mizerski, Freiden and Greene 1983) and can be presumed to have similar effects on attitudinal or satisfaction responses.

For these reasons, observational measures such as those suggested in part (c) of the Figure may actually be better for some purposes than the more direct satisfaction measures identified elsewhere in the Figure. Although these behavioral measures may be influenced by other external factors, the causal flow may be sufficiently strong to drive discernible, theoretically important differences. The influence of satisfaction on such behaviors as word-of-mouth, complaining, and repurchase is examined in detail in these separate literatures.

## THE TAXONOMY

Prior reviews have assessed only selected measures, a compromise necessitated by the complexity of analyses. The Figure arrays a more complete set of such measures displayed along two dimensions.

Although considered to be separate from the feeling of satisfaction in the conceptualization adopted, the disconfirmation cognition does play a role and has historically been used as an operationalization of satisfaction. Thus measures of disconfirmation are included as the first entry in part a of the Figure. This taxonomy differs somewhat from Andreasen's (1977a;b). Whereas Andreasen was concerned with the influence of time and the relative "objectivity" of measures, the present taxonomy is based more on the nature of the measures themselves than on any implicit theory of satisfaction or theory of measurement. As such, two dimensions evolved: (1) a cognitive-affective-conative dimension reflecting what is being measured, and (2) a verbal-graphic dimension reflecting how the measures are collected. At this point, no distinction is being made between those measures which treat satisfaction/dissatisfaction as a single continuum and those which posit separate constructs, as discussed previously. For the most part, the scales presented could be adapted for either conceptualization; they are shown in as close to original form as is feasible in Figure 1 at the end of this article.

Evaluative verbal measures of satisfaction are the most commonly used of the techniques depicted in both survey and experimental research. As such, it is important to note several issues which arise in their use: (1) Each requires an interpretation by the respondent and questioner of the word "satisfaction" or some variant thereof. As noted, the word has a variety of meanings even in academic research. (2) Where a midpoint is included, it is often not marked (e.g., measure #13), marked in an ambiguous manner (e.g., measure #6), or marked in apparent conflict with other measures (e.g., measure #5 hypothesizes a mixed evaluation whereas measure #7 suggests a lack of evaluation). (3) Not providing for a neutral or mixed response (e.g., measure #9) forces a

possibly spurious response. (4) The range of gradations provided, from dichotomous (e.g., measure #8) to a 13-point scale (e.g., measure #13) suggests different evaluation processes.

The measures classed as "other" provide a slightly different perspective. (1) The need scale (measure #16) is somewhat more evaluative than the expectation disconfirmation scales in the first group. (2) Although the specific adjectives used for the semantic differentials (measure #17) were not provided by the original authors, related work by Westbrook and by Oliver suggests that this particular technique may alleviate some of the definitional ambiguity mentioned above by the use of synonyms in the measurement of aspects of "satisfaction". (3) The last type of "measurement" in this group encompasses those open-ended survey techniques that ask the respondent to first identify a satisfactory or dissatisfactory critical incident and then provide more details about it.

The graphic measures of satisfaction as an evaluation, presented at the end of part (a) of the Figure, probe for essentially the same information as the verbal measures. The graphic format, however, is better able to communicate the concept of quantities of satisfaction (dissatisfaction), thus removing some of the ambiguity of the verbal measures. This technique also makes the distinction between mixed evaluations and the absence of evaluation more evident.

Part (b) of the Figure presents measures that are more consistent with the emotional definition of satisfaction that has been adopted. The Likert-type scales (measure #22) were defined to be "emotional in content" when presented by Oliver (1980a, p.463) despite some resemblance to the evaluative scales in part (a) of the Figure. The next scale (measure #23) was derived from Andrews and Withey's (1976) set of indicators of well-being (as were a number of the measures being reviewed). This single scale seems to capture both the evaluative and emotional aspects of satisfaction in its labels and seems to provide ample options for neutral responses (although this is sometimes defeated by omission of the off-scale response categories; e.g., Jordan and Leigh 1984). It is not clear from the CS/D literature, however, whether or not the scale possesses more than ordinal properties (e.g., interval which has been presumed for some of the other scales).

A recent innovation in measurement within the CS/D literature is the technique being developed by Westbrook (1983) to assess individual emotions at times or occasions that are critical in the satisfaction process. Although still in preliminary stages, these measures hold promise as more direct, but less obtrusive measures of satisfaction than the evaluative scales presented previously. Figure 4b shows only a portion of the measurement scheme (measure #25) that has been adapted from Izard's (1972) Differential Emotions Scale.

The original scale utilized responses to 69 separate items describing a person's emotional profile at a particular time. Responses to specific items are summed and the resultant profile is a subset of the ten emotional dimensions listed in the Figure. Westbrook has used a truncated, 31-item version of the scale to describe consumers' emotions with respect to their automobiles.

Factor analyses have revealed four (Westbrook 1983) to six (Westbrook and Oliver 1984) distinct profiles of emotional responses.

Measurement of emotions is difficult because emotions are difficult to verbalize and degrees of emotion are hard to represent. Thus, the graphic emotion instruments (measures #26-28) offer some simplification in representing a gestalt reaction.

Finally, satisfaction has been defined as the precursor to specific behaviors (Cardozo 1965) and is treated in the CS/D and CB literatures as theoretically linked to such behaviors (Figure 3). Part (c) of the Figure outlines behavioral measures that have been used as measures of satisfaction. Even if these are not justified as direct measures of feeling, the causal flow that has been proposed suggests that behavior may be indicative of strong feeling. Note that the graphic measures are observations of actual behavior (measures #32, #33). This categorization preserves the composite, less dependent on connotation, characteristics of previous graphic measures.

## SUMMARY AND RECOMMENDATIONS

More than thirty purported measures of satisfaction have been identified and classified by content and form. Only a few of these have been subjected to assessments of reliability and validity.

The researcher in search of an appropriate scale is well-advised to begin with this list and the competitive reviews cited above. There should be little need to develop additional measures.

The viability of CS/D as a construct, separate from attitude, is dependent on careful definition and measurement. Most recent theoretical treatments identify satisfaction (dissatisfaction) as a feeling or emotion concept. Measures in part (b) of the Figure assess directly this concept and should be strong candidates for measures of the construct.

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**Figure 1**  
**Measures Used in Consumer Satisfaction Research**

**(a) Evaluative/Cognitive Measures in Consumer Satisfaction**

**Verbal**

**Disconfirmation measures**

1. My expectations were:

Too high: It was poorer than I thought	Accurate: It was just as I had expected	Too low: It was better than I thought
: _____	: _____	: _____

(Oliver 1977)<sup>a</sup>

2. \_\_\_\_\_ was much better(worse)<sup>b</sup> than I expected.

Very Strong Yes	Strong Yes	Yes	?	No	Strong No	Very Strong No
_____	_____	_____	_____	_____	_____	_____

(Swan, Trawick and Carroll 1981)

3. Much more than I expected      Somewhat more than I expected      About what I expected      Somewhat less than I expected      Much less than I expected

1	2	3	4	5
_____	_____	_____	_____	_____

(Aiello, Czepiel, and Rosenberg 1977)

4. Derived measure for attribute levels

(Level currently provided) - (Level ideally desired) = Disconfirmation

(Westbrook and Oliver 1981)

**Degree of satisfaction measures**

5. Overall, how satisfied have you been with this \_\_\_\_\_?

100% Completely Satisfied	90	80	70	60	50 (Half & Half)	40	30	20	10	0% Not at all Satisfied
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(Moore & Shuptrine 1984; Oliver & Bearden 1983;  
Oliver & Westbrook 1982; Westbrook 1980b; Westbrook 1981).

6. \_\_\_\_\_ was very satisfactory (unsatisfactory)

Very Strong Yes	Strong Yes	Yes	?	No	Strong No	Very Strong No
_____	_____	_____	_____	_____	_____	_____

(Swan, Trawick and Carroll 1981)

7. How satisfied were you with \_\_\_\_?

Very Dissatisfied	Somewhat Dissatisfied	Slightly Dissatisfied	Neither	Slightly Satisfied	Somewhat Satisfied	Very Satisfied
_____	_____	_____	_____	_____	_____	_____

(Oliver and Bearden 1983; Oliver and Linda 1981)

8. Were you satisfied/dissatisfied? (Choose one.)

(Gronhaug and Arndt 1980)

9. I am always or almost always satisfied with... I am sometimes satisfied with... I am sometimes dissatisfied with... I am always or almost always dissatisfied with...

\_\_\_\_\_

(Day and Bodur 1978; 1979)

10. I am quite satisfied with... I am somewhat satisfied with... I am somewhat dissatisfied with... I am quite dissatisfied with...

\_\_\_\_\_

(Day and Bodur 1979)

11. Completely Satisfied (Dissatisfied) Very Satisfied (Dissatisfied) Satisfied (Dissatisfied) Somewhat Satisfied (Dissatisfied) Not Satisfied (Dissatisfied)

1 2 3 4 5

(Aiello & Czepiel 1979; Aiello, Czepiel and Rosenberg 1977)

12. Very Satisfied Somewhat Satisfied Neither Satisfied Nor Dissatisfied Somewhat Dissatisfied Very Dissatisfied

1 2 3 4 5

(Aiello, Czepiel and Rosenberg 1977; Mowen and Grove 1983)

13. Now that you've actually used the product, how satisfied with it are you?

Dissatisfied \_\_\_\_\_ Satisfied \_\_\_\_\_

\_\_\_\_\_

(Bahr 1982)

14. Completely Satisfied Fairly Satisfied Not too Satisfied

\_\_\_\_\_

(Hughes 1977)

15. I am satisfied with \_\_\_\_.

Agree \_\_\_\_\_ Disagree \_\_\_\_\_

(Oliver and Bearden 1983)

**Other evaluations**

16. To what extent does this \_\_\_\_ meet your needs at this time?

Extremely Well \_\_\_\_\_ Extremely Poorly \_\_\_\_\_

(Oliver and Westbrook 1982; Westbrook 1980b)

17. Summed semantic differential scales of satisfaction.

(Oliver and Bearden 1983; Oliver and Westbrook 1982; Westbrook and Oliver 1981)

18. Likert Scales

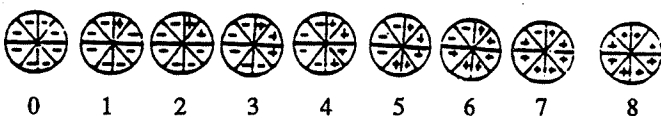
(Oliver 1980a)

19. Satisfactory or Dissatisfactory occasions/products as judged by respondent.

(Day and Bodur 1978; Locker and Dunt 1978; Richins 1983a)

**Graphic**

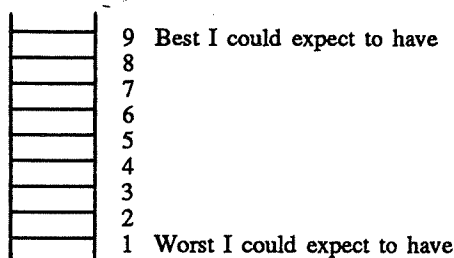
20. Imagine that the following circles represent the satisfaction of different people with \_\_\_\_\_. Circle 0 has all minuses in it, to represent a person who is completely dissatisfied with \_\_\_\_\_. Circle 8 has all pluses in it, to represent a person who is completely satisfied with \_\_\_\_\_. Other circles are in between.



Which circle do you think comes closest to matching your satisfaction with \_\_\_\_\_?  
Write the circle number here: \_\_\_\_\_.

(Oliver and Bearden 1983; Oliver and Westbrook 1982; Westbrook 1983; Westbrook and Oliver 1981)

21. Here is a picture of a ladder. At the bottom of the ladder is the worst \_\_\_\_\_ you might reasonably expect to have. At the top is the best \_\_\_\_\_ you might expect to have. On which rung would you put \_\_\_\_\_?



(Andrews and Withey 1976)

**(b) Emotional/Affective Measures in Consumer Satisfaction**

**Verbal**

22. Likert scales

- a. I am satisfied with \_\_\_\_\_.
  - b. If I had it to do all over again, I would \_\_\_\_\_.
  - c. My choice to \_\_\_\_\_ was a good one.
  - d. I feel bad about my decision concerning \_\_\_\_\_.
  - e. I think that I did the right thing when I decided \_\_\_\_\_.
  - f. I am not happy that I did what I did about \_\_\_\_\_.
- Agree ... (9) ... (7) ... (5) ... Disagree  
Strongly Agree ..... Strongly Disagree

(Moore & Shuptrine 1984; Oliver 1980a; Oliver and Bearden 1983; Oliver and Westbrook 1982; Westbrook and Oliver 1981)



23. Mark on one of the nine blanks below the position which most closely reflects your satisfaction with \_\_\_\_.

Delighted Pleased Mostly Satisfied Mixed Mostly Dissatisfied Unhappy Terrible Neutral Never Thought About It  
 (Jordan and Leigh 1984 [7 items]; Moore and Shuptrine 1984; Oliver and Bearden 1983; Oliver and Westbrook 1982; Westbrook and Oliver 1981)

24. Content analysis of subject-provided protocols with scoring for satisfaction or emotional statements.  
 (Locker and Dunt 1978; Westbrook 1980b)

25. Scales measuring separate emotions.  
 Please indicate the extent to which each word describes the way you feel with respect to \_\_\_\_.

1 2 3 4 5  
 Very Slightly Slightly Moderately Considerably Very  
 or not at all Strongly

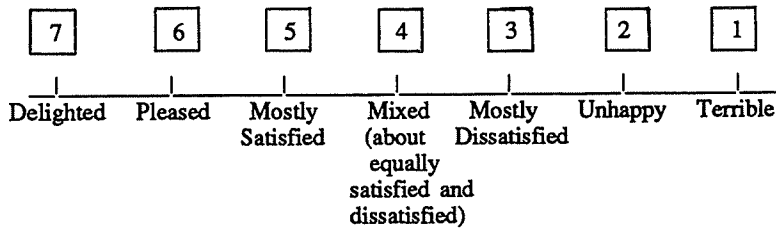
Adjectives "loading" on each of the ten emotional dimensions<sup>d</sup>

1) Interest - Excitement, 2) Enjoyment - Joy, 3) Surprise - Startle, 4) Sadness - Anguish, 5) Anger - Rage, 6) Disgusted - Revulsion, 7) Contempt - Scorn, 8) Fear - Terror, 9) Shame - Shyness and 10) Guilt - Remorse  
 (Westbrook 1987; Westbrook and Oliver 1984)

**Graphic**

26. How do you feel about \_\_\_\_?

I feel:

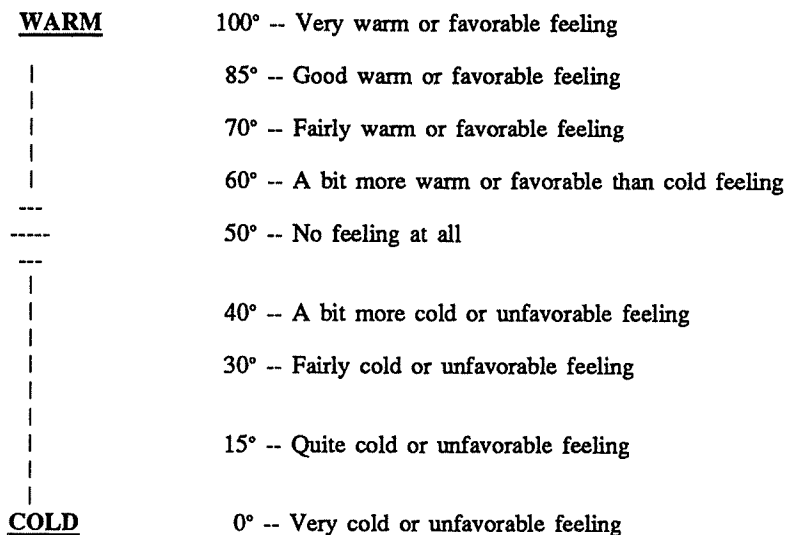


- A Neutral (neither satisfied nor dissatisfied)
- B I never thought about it.

(Andrews and Withey 1976; Westbrook 1980b)

27. "Feeling" Thermometer

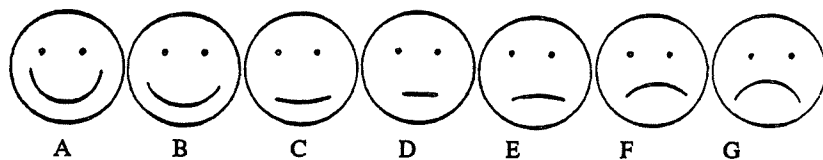
Where would you put \_\_\_\_ on the feeling thermometer?



(Andrews and Withey 1976; Oliver and Westbrook 1982; Westbrook and Oliver 1981)

28. Faces scale

Here are some faces expressing various feelings. Below each is a letter.



Which face comes closest to expressing how you feel about \_\_\_\_?

(Churchill and Surprenant 1982; Oliver and Westbrook 1982; Westbrook and Oliver 1981)

(c) Behavioral/Conative Measures in Consumer Satisfaction

Verbal

Behavioral intentions

29. Because of \_\_\_\_ I would come (shop) here again.

Very Strong Yes	Strong Yes	Yes	?	No	Strong No	Very Strong No
—	—	—	—	—	—	—

(Swan, Trawick and Carroll 1981)

30. How likely are you to play with (use) \_\_\_\_ in the future?

Very Unlikely	Unlikely	Likely	Very Likely
-2	-1	+1	+2
_____	_____	_____	_____

(Jordan and Leigh 1984)

31. Knowing what you know now, what are the chances in ten (10) that you would choose to use the \_\_\_\_ again?

0	1	2	3	4	5	6	7	8	9	10
No Chance										Certain

(Oliver and Bearden 1983; Westbrook and Oliver 1981)

**Graphic (Observational)**

32. Measures of time and extent of use.

(Bjorklund and Bjorklund 1979)

33. Filing complaint as sign of dissatisfaction.

(TARP 1979)

34. Loyalty, repurchase as sign of satisfaction.

(LaBarbera and Mazursky 1983)

**Notes to accompany Figure:**

- <sup>a</sup> Citations provided are meant to serve as examples of scale use, not to provide an exhaustive bibliography.
- <sup>b</sup> Some parenthesized modifications of what was essentially the same scale are presented for the sake of simplicity.
- <sup>c</sup> In this case, the scale was compressed by omitting the neutral responses.
- <sup>d</sup> Again, for the sake of simplicity, all of the adjectives which were used are not presented in this Figure.