

# National Textile Center

## FY 2003 (Year 12) Continuing Project Proposal

### Project No.

S01-AC25

Competency: Management Systems

## Measuring Consumer-Apparel Interaction

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### Project Team:

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### Objective:

In today's fragmented marketplace, demographic categories like age, income, and ethnicity are less dependable explanations for consumer behavior. The objective of this study is to develop a stable, precise, and relevant measure of consumer types independent of demographic anchors. No measure exists that both focuses on consumer-apparel interaction and was carefully developed using psychometric techniques to verify its reliability and validity. Because this measure will have robust psychometric properties, the Consumer-Apparel Interaction Indicator (CAII) will yield results that can be interpreted with confidence whether to target a consumer segment, define a niche market, or profile a market-of-one for customization.

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### Progress Statement:

#### CAII Version 1: Construct specification and scale development.

The primary researcher working with seven graduate students at Auburn University completed a review of existing measures and their level of psychometric development. The following constructs were selected to be incorporated in the CAII—fashion leadership, innovativeness, motivation to dress, need for cognition/emotion, and involvement/interest in apparel. During the scale development stage, items (questions) from existing measures were selected and revised and new items created representing perceptions, opinions, attitudes, and behavior associated with each construct. This CAII Version 1 was much too long for practical use (156 questions). Subsequent stages provide ways to weed down the questions to those most stable, precise, and relevant.

#### CAII Version 2: Initial Administration. (Completed February 2002.)

CAII Version 1 was administered to 132 college students at Auburn University. Results were analyzed according to psychometric development techniques: 1) Item Analysis, a correlational study where each item (question) was correlated to the test as whole and within the scale to reveal which items should be eliminated. 2) Reliability coefficient for the total test and for the test given deletion of low correlating items. 3) Analysis of sub-scales for the five constructs. (See the October, 2002 Annual Report for detailed results of this study.)

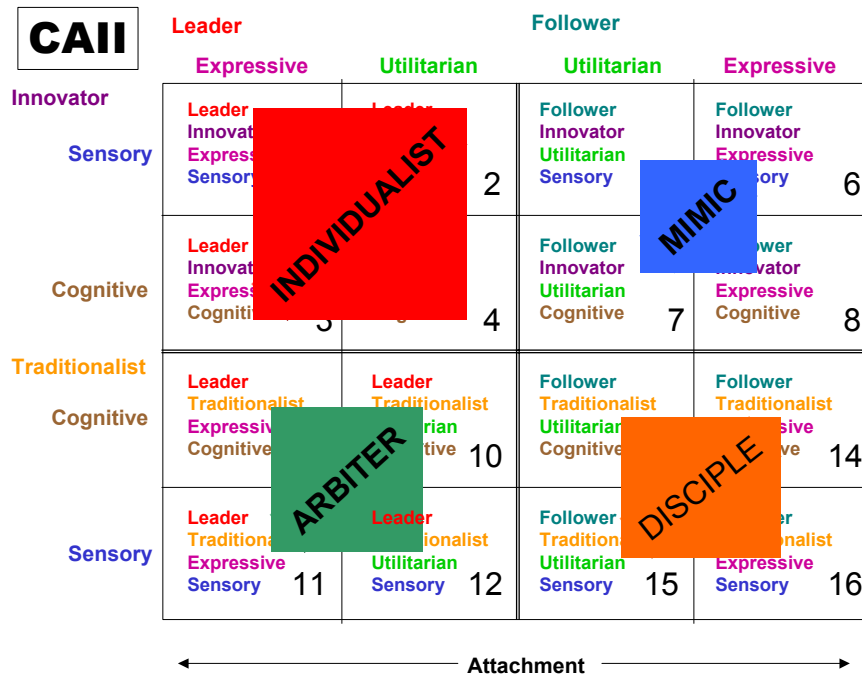
#### CAII Version 3: Content Validity. (Completed August 2002.)

Content validity depends on whether the stimulus items represent the entire domain of behaviors being measured. CAII Version 2 was submitted to review by five experts in various facets of consumer-apparel interaction. The experts evaluated the CAII for construct specification and individual test items for relevance and clarity. CAII Version 3 is the result of research up to this point and the experts' review. Some items were dropped, some reworded, some added based on suggestions made by the experts. The resulting version consists of 80 questions—a

practical length that can be completed in 15 minutes. The final structure of the measure consists of five scales with 16 questions per scale (8 for each end of a continuum). Scoring the CAII sort consumers into four categories and 16 types. The four categories represent a predominate mode for interacting with apparel (see Figure 1):

- The **Individualist** is an innovator and fashion explorer who uses fashion to demonstrate personal distinctiveness.
- The **Mimic** identifies with the spirit of the times and imitates fashion leaders (and distant opinion leaders like celebrities) by adopting and discarding looks rapidly.
- The **Arbiter** is a fashion leader but in a traditionalist style who sets the appropriateness standards for others in her personal network.
- The **Disciple** identifies with social traditions and imitates fashion leaders preferring mainstream, classic, and traditional styles.

Figure 1: Factor Structure and Consumer Classification Scheme



**CAII Version 4: Test-Retest Reliability** (Scheduled for completion by December 31, 2002.)

To establish stability of the measure over time (that is, the likelihood that consumers would answer the questions in the same way consistently), this version was administered to 150 college students on two occasions three weeks apart. Item analysis, reliability coefficients, and factor structure will be compared between the two administrations of the measure.

**CAII Version 4: Criterion Validity** (Scheduled for completion April 2003.)

Measures are developed to predict some relationship. The next step will be to conduct a study with 500 respondents drawn from a national consumer panel. The criterion information will be frequency of shopping by distribution channel, frequency of purchase, amount of purchasing by apparel categories, style and brand preferences. In addition to the usual item analysis, reliability coefficients, and factor structure, each item will be correlated with the criterion information. Each of the 16 consumer types identified by the CAII should have a distinctive pattern of purchasing behavior to demonstrate the measure's criterion-related validity.

**Final Version:** In the future competitive advantage will go to manufacturers and merchants who become expert advisors guiding customers to relevant products and shopping experiences. The CAII identifies 16 distinctive consumer types in a multi-trait system useful for targeting consumer segments, identifying market niches, and profiling individual customers. The CAII is a tool for understanding consumers' relationship to apparel and the intensity of their interest in the product category. Industry researchers and academics can confidently use and interpret results obtained with the CAII because it has been systematically developed based on established psychometric techniques. (Available May 1, 2003)

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**Next Year's Goals:**

Development stages for the CAII will be complete this year. However, all development has been done using female respondents. In the third year of the project, the focus will shift to the male consumer and the development of a parallel form of the CAII.

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**Approach:**

Developing a parallel version of the CAII for use with male consumers involves revision of the factor structure and items. The revised version should reflect the language men use to discuss apparel and the social and cultural aspects of their purchase behavior. The research will proceed as follows:

- Content analysis of men's fashion magazines for apparel-related language and concepts.
- Literature review of previous apparel research with male consumers.
- A qualitative stage—a series of focus groups with male consumers.
- Revision of the CAII and a pre-test of the measure with a small purposive sample of male consumers where they are invited to assess the clarity of the items.
- Expert review of the revised measure and the pre-test to establish content validity.
- A quantitative stage—a study with 500 male respondents drawn from a national consumer panel.

The data will be analyzed using psychometric techniques such as item analysis and reliability coefficients. Additionally, criterion information—frequency of shopping by distribution channel, frequency of purchase, amount of purchasing by apparel categories, style and brand preferences—will be correlated with the consumer types identified by the CAII. Each of the 16 consumer types identified by the CAII should have a distinctive pattern of purchasing behavior to demonstrate the measure's criterion-related validity.

Two parallel versions of the CAII—one for female consumers, one for male consumers—provide the precise, stable, and reliable measurement tools needed by researchers in industry and academia for segmentation studies.

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**Outreach to Industry:**

Industry executives will have access to the CAII (for female consumers) including a summary of the research results and an interpretation guide by May 1, 2003. They can attend the focus groups with male consumers. They are encouraged to follow the development stages of the CAII via the project's Web site. They will have access to the CAII (for male consumer) including a summary of the research results and an interpretation guide by May 1, 2004.

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**New Resources Required:**

Funding for focus group research and the panel study to be conducted in association with national research firms.