MODELING RECURRENT PATTERNS OF INTERPERSONAL RELATIONSHIP WITH STRUCTURAL ANALYSIS OF SOCIAL BEHAVIOR: THE SASB-CMP

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The SASB-CMP is a method for generating and organizing information about recurrent relationship patterns. The intensive nature of the method probably renders it most useful for detailed case analyses. Research applications of the method may relate to patient diagnosis, treatment planning, measurement of change, and therapist training.

Repetitive interpersonal patterns have been a core concept for most psychodynamically informed therapies since Freud articulated the importance of transference and “repetition compulsion.” The SASB-CMP is one of a number of recent methods for systematically characterizing such interpersonal patterns (see Strupp, Henry, Schacht, & Gaston, 1994, for a review). Work on precursors to the SASB-CMP began during 1982, in conjunction with planning for the Vanderbilt II study of time-limited dynamic psychotherapy. In deference to previous literature, this early effort to formulate recurrent relationship patterns was labeled the “dynamic focus” (Schacht, Binder, & Strupp, 1984). Since that beginning effort, the method has evolved structurally and has been renamed the “cyclic maladaptive pattern” or “CMP”, a phrase more closely linked to theoretical assumptions about self-affirming expectations and the circular nature of causality in interpersonal systems (Butler & Binder, 1987; Jones, 1986; Wachtel, 1983). This paper focuses on the CMP construct as it has been integrated with a standard model of interpersonal functioning, Structural Analysis of Social Behavior (SASB: Benjamin, 1974; 1993). Accordingly, the version described here is called the “SASB-CMP” (see also Johnson, Popp, Schacht, Mellon & Strupp, 1989).1 SASB characterizes interpersonal behaviors at a low level of inference and is relatively theory-neutral. Consequently, the SASB-CMP is applicable to studies of therapies representing a wide range of orientations. In this regard, the SASB-CMP may have a particularly useful role in research on psychotherapy integration.

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1Research methods may sometimes evolve over time without any change of name (for example, compare the original 1977 version of Luborsky’s CCRT method with the present form). Perhaps psychotherapy researchers could learn from software publishers and begin referring to “versions” of particular methods, such as “SASB-CMP version 2.0".
The SASB-CMP model assumes that psychotherapeutic relationship narratives share a common underlying set of basic elements. These elements together comprise a minimum structure for a "well-formed" relationship narrative. This structural prescription may be understood as analogous to the way that a well-formed complete sentence must include, at a minimum, the elements of a subject and a verb. The initial set of elements was based on empirical observations of therapist's verbalizations in therapy about interpersonal events, using cases from the Vanderbilt I study and from pilot work for Vanderbilt II (Schacht, Binder, & Strupp, 1984). Three domains of therapist statements were noted: 1) interpersonal actions and reactions; 2) internalized responses directed toward the self ("introjective acts"); and 3) fantasies or expectations, composed of predictions, wishes, and fears, that could address either interpersonal or introjective phenomena.

Based on the observation that all therapist statements about interpersonal events could be thus categorized, it was hypothesized that any coherent narrative about an interpersonal pattern, including therefore any narrative about a transference pattern, must take into account these three domains of therapist statements. Unfortunately, therapists do not speak in psychometrically validated language. Their natural language narratives are subject to numerous problems of ambiguity which complicate research. For example, is "aggressive" the same as "hostile"; is "upset" the same as "angry"; is "to like" someone the same as to "affirm"? To reduce problems associated with natural language, a standard and psychometrically validated model for interpersonal functioning was sought. After reviewing numerous general models of interpersonal functioning, the Vanderbilt research group selected Structural Analysis of Social Behavior as the most theoretically cogent, psychometrically sound, and clinically sophisticated model available. A basic knowledge of SASB is necessary to understand the structure and logic of the SASB-CMP. Readers unfamiliar with details of the SASB model may consult the following references for a basic introduction (Benjamin, 1974, 1984, 1993, 1994; Benjamin et al., 1986; Grawe-Gerber & Benjamin, 1989). For convenient reference in subsequent discussion, the SASB cluster model is reproduced as Figure 1.

### SASB-BASED CMP MODEL

The SASB-CMP integrates the foregoing empirically derived 3-element structure for interpersonal narratives with the SASB-model. The structure of the SASB-CMP is detailed in Table 1 and a clinical example appears later in this paper. Examination of Table 1 reveals a striking correspondence between the 3 domains of interpersonal verbalizations made by therapists, as noted above, and the structure of the SASB model. This correspondence is serendipitous, and might be viewed as an informal suggestion of cross-validation.

There is no assumption that the three CMP domains are mutually exclusive,
since any given interpersonal event has the capacity to reflect action in more than one domain. For example, the introject "I am an idiot" (self-criticism, SASB 3–6) may, when publicly uttered in certain situations, also be an interpersonal act, as when the public self-criticism serves to control another person by evoking guilt and preempting their opportunity to independently criticize the speaker.

The SASB-CMP structure views the domains of interpersonal acts, introjective acts, and expectations/fantasies from the various perspectives (SASB "focus" dimension) available through the three SASB model surfaces. An optional final (fourth) narrative element is a circular causal hypothesis that relates the interpersonal acts, introjective acts, and fantasies in a self-sustaining interpersonal pattern. Empirically accessible principles of interpersonal dynamics, defined in the SASB literature as complementarity, introjection, identification/similarity, opposition, and antithesis, may be applied to make explicit testable hypotheses about such circular-causal models (Schacht, 1994).

**PROCEDURE FOR CONSTRUCTING A SASB-CMP**

Constructing a SASB-CMP involves four steps, as follows: 1) A source of interpersonal data must be selected, such as assessment interview, therapy session,
Table 1. Structural Domains of the SASB-CMP

INTERPERSONAL ACTS (SASB Surfaces 1 & 2)
1) Interpersonal acts by the patient:
   a) How the patient acts on others (SASB surface 1)
   b) How the patient reacts to others (SASB surface 2)
2) Interpersonal acts by others:
   a) How others act on the patient (SASB surface 1)
   b) How others react to the patient (SASB surface 2)

INTRAJECTIVE ACTS (SASB Surface 3)
1) Introjective acts by the patient: How the patient observably treats him/herself in transactions with the other
2) Introjective acts by the other: How others observably treat themselves in transactions with the patient

EXPECTANCIES: PREDICTIONS, WISHES, FEARS (All Surfaces)
1) Fantasies held by the patient regarding:
   a) How the patient will act on and react to others (SASB surfaces 1 & 2)
   b) How others will act on and react to the patient (SASB surfaces 1 & 2)
   c) How the patient and others will act introjectively (SASB surface 3)
2) Fantasies held by others, as imagined by the patient, regarding:
   a) How others will act on and react to the patient (SASB surfaces 1 & 2)
   b) How the patient will act on and react to others (SASB surfaces 1 & 2)
   c) How others and the patient will act introjectively (SASB surface 3)

CAUSAL HYPOTHESIS
Hypothesized circular causal relationships among the foregoing, maintained by interpersonal complementarity, that create a self-sustaining interpersonal relationship pattern.

questionnaire, etc. 2) Interpersonal information must be extracted systematically from that data source. 3) The interpersonal information is then distributed into the domains of the SASB-CMP structure. 4) Finally, a narrative hypothesis is generated that organizes the information contained within the CMP elements into a circular causal formulation. Each of these steps will be considered below in further detail.

Step 1: Selection of Data Source. The CMP model itself makes no presumptions about which sources of raw interpersonal data are to be preferred, although it is our belief that access to both process and content data are desirable. The most useful data source would be sufficiently rich and detailed to provide information that falls into each of the SASB-CMP domains as enumerated in Table 1. Ideally, the process of extracting information would continue until data was available for all of the domains. Realistically, unless specially structured interviews are conducted, small psychotherapy segments typically do not contain reports of interpersonal events in all the domains. For example, there may be no discussion of a patient's introjective experience or no discussion of the patient's fantasies about what others wish and fear in relation to him/her. The absence of information relevant to all the domains of the SASB-CMP structure has no certain significance at the present time. Absent information might reflect a skewed or too-small sample, inattention by the interviewer, or limitations in the way the patient experiences and thinks about interpersonal events. In such a case, the SASB-CMP formulation can proceed, while noting the missing data. The question of how to sample and when to stop is discussed further in the section on "Problems, prospects and future directions." Fluent familiarity with the SASB model and the CMP structure may be required for optimal interviewer performance.

Step 2: Extraction of interpersonal material. Extraction of interpersonal pro-
cess and content scores from the raw data is accomplished by SASB-coding. To be SASB-codable, interpersonal content and/or process material must permit three judgments: 1) interpersonal focus; 2) the degree of affiliation–disaffiliation; and 3) the degree of independence–interdependence. Any account of an interpersonal event that does not allow all three judgments to be made is too vague to be represented with the SASB model and is “uncodable”. Procedures for making these SASB-coding judgments are described in manuals (Benjamin, Giat, & Estroff, 1981; Grawe-Gerber & Benjamin, 1989) and in Benjamin, Foster, Roberto, and Estroff (1986). Coding reliabilities in excess of .90 can be expected for experienced clinician-researchers (e.g., Benjamin et al., 1986; Henry, Schacht, & Strupp, 1986).

The requirement that raw data be SASB-codable and that data be sought to fulfill each domain of the CMP structure forces a sharpened inquiry by interviewers that results in a more complete and less ambiguous interpersonal database. There are data suggesting that SASB-codability may operationalize a dimension of communication clarity positively associated with clinical outcome (Mueller, 1985).

Step 3: SASB-CMP structure. The SASB-coded interpersonal information is initially organized by distribution into the domains of the SASB-CMP structure. For example, all of the interpersonal acts are listed according to whether they involve actions or reactions, and whether they are performed by the patient or by the other person. Likewise, all of the predictions, wishes, fears, and introjective acts are similarly assigned to their respective elements.

This distribution of SASB-coded observations into the CMP domains generally follows in a straightforward low-inference manner from the underlying SASB codes, as demonstrated in Table 1. However, one recurrent source of coding difficulty in our experience has related to the task of distinguishing between observed events, on one hand, and predictions, wishes, and fears, on the other. For example, when a patient describes a reaction from another person, it is not always apparent whether the patient is referring to something they believe has actually occurred, or whether they are referring to something that is predicted, wished for, or feared. It seems possible that such a lack of differentiation between perceptions and fantasies might reflect something about patient's personality structure. Alternately, such lack of differentiation might also reflect imprecision on the part of the interviewer in questioning the patient. Further study of this issue would be helpful.

Step 4: Causal hypothesis. In the final (optional) step, a narrative hypothesis is generated to organize the information contained within the SASB-CMP domains into a description of a causally interconnected (cyclic) interpersonal pattern. This is the most inferential step in the process. However, the empirical testability of the hypothesis can be assured if causal hypotheses are based on predictions made from interpersonal dynamic principles inherent to the SASB model (e.g., introjection, complementarity). Generation of causal hypotheses probably requires appropriate interview focused on relevant information about causal relationships. Such an interview may elicit clear descriptions (i.e., SASB-codable) from the patient about how various elements of a described interpersonal transaction relate dynamically to each other.

The usual unit of analysis for SASB-coding is referred to as a “thought unit”, by which is meant an expression of a complete thought. Ordinarily such units are about one simple sentence in length. For the purposes of the SASB-CMP, larger units of analysis are probably feasible, such as the “relationship episode” employed by Luborsky’s CCRT method.

This is entirely separate from the question of how fantasies may shape perception, an issue not addressed by the SASB-CMP.

Study of the INTREX questionnaire items may help therapists to familiarize themselves with questions designed to yield interpersonally complete material.
Although cyclic narratives have no real “beginning” or “end”, it has been observed that causal narratives are usually cogent when they begin with statements of expectancy (predictions, wishes, and fears). These statements are then followed by statements of interpersonal actions and reactions that occur in relation to these fantasies. Finally, statements are made of the ensuing introjective responses and causal hypotheses are generated linking these introjective reactions to the maintenance of the initial predictions, wishes, and fears. Thus, a prototypic causal narrative might be: “I fear A in relation to the other person. Because of this fear, I do B and then the other person does C. As a result I feel D about myself. When I feel D about myself, I am more likely to do E, which causes the other person to do A.” This sequence for presenting causal narratives may not fit all situations, and experimentation with alternative formats may be useful in particular cases.

CASE ILLUSTRATION: CMP FORMULATION OF MS. SMITHFIELD

Ms. Smithfield is an intelligent and articulate young woman, age 23 at the time of the interview, who has a chaotic history including a troubled childhood, a divorce, numerous troubled relationships characterized by a desperate quest for acceptance, love, and stability, (but leading to five “rapes”), a serious accident including a head injury and other medical problems, and various excursions into obscure religions and forms of healing that appear to represent a search for meaning in life. She seeks psychotherapy after a neuropsychological evaluation suggested that subjective memory difficulties had an emotional basis.

The following CMP formulation represents a consensus of four judges. The raw data set is too extensive to be reproduced here. It consisted of extracted SASB-coded relationship episodes and codings of the patient–therapist interpersonal process from a one-hour sample interview. The summaries within each SASB-CMP domain below represent the predominant codings for that domain. The sample interview was limited in that it did not explore a number of potentially important interpersonal events in sufficient detail to permit SASB coding. For example, Ms. Smithfield discussed a pattern of “emotional wars” and “emotional manipulativeness” in relation to her mother. Without additional clarification, the terms “emotional war” and “emotional manipulativeness” do not permit judgments on the dimensions of focus, affiliation and interdependence required to assign a SASB code.

INTERPERSONAL ACTS

Ms. Smithfield’s descriptions of interpersonal acts may be summarized in terms of an overall tendency to experience herself as a passive participant rather than an active agent. In the case of hostile interactions, this places her in the role of a victim. It was also common for her descriptions of interpersonal transactions to include elements that transformed them into mixed or complex interpersonal experiences which combined hostile with friendly elements. Specific evidence from SASB codings in support of the overall victim stance included:

Acts by others. The majority of Ms. Smithfield’s interpersonal codes described other persons as acting on her (SASB surface 1) rather than reacting to her (SASB surface 2). Many descriptions involved complex transactions in which friendly acceptance and help (SASB clusters 1-2, 1-4) were mixed with hostile control (1-5, 1-6), assault (1-7), or abandonment (1-8).

Acts by Ms. Smithfield. In general, Ms. Smithfield described her own interpersonal behavior

The term “rape” is used advisedly. It is the term applied by Ms. Smithfield, but her usage appears idiosyncratic. For example, after describing an episode of consensual sex between herself and a guru-teacher, she indicates that she retrospectively decided that the experience was one of rape because the guru should have known that she was vulnerable to his interpersonal influence. In describing how Ms. Smithfield’s interpersonal stance casts her report of “rape” in a special context, we do not imply that rape in general is a crime invited by its victims.
in terms of reacting to others rather than acting on them (i.e., predominance of codes on SASB surface 2 rather than on surface 1). A reactive stance is typical of one who experiences themselves as a victim.

EXPECTATIONS

Ms. Smithfield's descriptions of expectations are consistent with the above-mentioned victim stance. Specific evidence from the SASB codings in support of the overall victim stance included:

Expectations held by others. Ms. Smithfield said little about her views of other people's expectations. There was virtually no codable data bearing on this domain. (It is not clear to what extent her vagueness on this point is attributable to interviewer technique versus Ms. Smithfield's characteristic way of representing and experiencing other persons).

Expectations held by Ms. Smithfield. Ms. Smithfield's expectations of others typically combined an affiliative wish with a fear or prediction of a hostile reaction. She voiced wishes for acceptance and help from others (SASB 1-2, 1-4) and also for a self-helping and self-nurturing introject (3-2, 3-4). She feared rejection (1-6), abandonment (1-8) and self-criticism (3-6).

INTROJECTIVE ACTS

Introjective acts by others. References to introjective acts by other persons are absent. This may indicate a relatively immature and egocentric mode of understanding other persons' experience or may reflect interviewer technique.

Introjective acts by Ms. Smithfield. The vast majority of described introjective acts contained elements of hostility toward the self (SASB 3-6, 3-8), but many of those were mixed with affiliative components. A prototypic introjective act involved self-criticism (3-6) and/or self-neglect (3-8) as a reaction to wishing for love (1-3) and acceptance (1-2). Occasionally Ms. Smithfield made straightforward reference to efforts at constructive self-help (SASB 3-4), such as trying to "think things through" or to "reconstruct herself" or references to having written 17 pages in her journal in an effort to understand herself.

SASB-CMP SUMMARY

The foregoing trends in interpersonal acts, expectancies, and introjective acts may be summarized in terms of three core observations:

1) Ms. Smithfield presents in an interpersonally reactive stance, in which she is victim to other persons who act on her. This is reflected by a predominance of codes on SASB surface 2. Wishes for acceptance and help lead her to assume complementary dependent and submissive roles. Fears of assault and abandonment are also prominent, in response to which she self-protectively walls-off and avoids others.

2) Complementing her interpersonal experience, Ms. Smithfield's introjective experience is predominantly negative, reflected in SASB codes in clusters 3-6 and 3-8 (self-critical and self-neglectful). This is true despite her overt wish to assume a more self-nurturing and self-helping stance. Indeed, she feels guilty for wanting nurturance. Her self-neglectful acts are accompanied by an impaired sense of personal volition: bad things "happen" to her, and she simply drifts through them.

3) Interpersonal and introjective events are experienced as a complex and confusing mixture of friendliness, hostile control, and neglect or abandonment. This is reflected in a high frequency of descriptions that earned complex or mixed SASB codes.

CIRCULAR CAUSAL HYPOTHESES (COMPLEMENTARITY DYNAMICS)

1) Ms. Smithfield fears being victimized (SASB 1-6) and abandoned (1-8). She has introjected these experiences, so that her stance toward herself is highly self-critical and self-neglectful.
(3-6, 3-8). To protect herself she defensively walls off and avoids others (2-8). In so doing she implicitly casts others in the role of victimizer, which they may experience as unempathic and even as criticism. To break through her walling-off, and to defend their own integrity, others may respond with strong efforts at control (1-5), counter-criticism (1-6), and/or complementary abandonment (1-8). These reactions complement and reinforce her negative introject and are precisely the behaviors that Ms. Smithfield fears.

2) Ms. Smithfield wishes to be cared for and protected (SASB 1-4). To evoke this from others she attempts to present herself in a complementary trusting manner (2-4), and at such times she may see others in idealized terms. However, her wish for protection is so strong that she may assume a posture of outright submissiveness (2-5), the risks of which escape her as part of her self-neglectful introject. Others may experience this as an invitation to take control (1-5) or as a willingness to be sexually seduced, both of which are feared by Ms. Smithfield. When others respond in these feared ways, she experiences betrayal and attempts to protectively distance herself (2-8, perhaps 2-1 sometimes). However, this results in frustration of the wish to be close and protected and she eventually returns to presenting herself in a trusting and submissive manner.

3) Ms. Smithfield wishes to be accepted and respected (SASB 1-2). She attempts to evoke this from others by offering the complementary response of 2-2 (self-disclosure). However, because she is fearful of rejection, she vacillates and compromises by creating a mixed message in which she self-protectively uses the apparent disclosure to keep others at a distance (i.e., she is vague, or she attempts to satisfy others’ curiosity so they will not pry further: SASB 2-2/2-8). As a result, Ms. Smithfield does not succeed in evoking the wished-for acceptance and understanding and continues to feel neglected and abandoned (1-8). This, in turn, complements and reinforces her self-neglectful introject.

Diagnostic context and limitations. The case of Ms. Smithfield may illustrate some important contextual considerations and limitations of the SASB-CMP and probably all other current methods for describing recurrent relationship patterns.

In Ms. Smithfield we face a patient whose chief complaint involves a disturbance of information-processing. She sought psychotherapy after her short-term memory was reportedly impaired following injuries suffered in a motor vehicle wreck. Neuropsychological testing attributed the memory impairment to emotional disturbance rather than physical damage.

The SASB-CMP model is designed to describe problems that are expressed in the interpersonal domain. Memory loss is a problem of information processing, and pulls for an explanation in a comparable metric (cf. principle of problem–treatment–outcome congruence; Strupp, Schacht & Henry, 1988). Information processing difficulties represent an entire axis of description that interacts with but does not replace the interpersonal model of cyclical psychodynamics that underlies the CMP. While distortions of information processing, such as dissociation, amnesia, intrusions, defensive operations, and so on, may be embedded in and/or triggered by interpersonal events, they are not interpersonal events in themselves.

The relevance of this issue to the case of Ms. Smithfield is highlighted by considering the following questions:

1. How should we view Ms. Smithfield’s vague, rambling, abstract, often intellectualized and affect-restricted self-presentation? If we adopt an interpersonal perspective, we might hypothesize that it reflects an interpersonal walling off and avoiding (SASB 2-8) as described above. Alternately, from an information-processing perspective, her vagueness might be seen as a symptom of a more general cognitive style problem or difficulty with affectively charged mental representations. These features, in turn, may be seen as arising from an interpersonal matrix or as having alternate etiologies.

2. How should we view Ms. Smithfield’s reported vulnerability to repeated trauma (i.e., her report of being raped on multiple occasions)? We might note that in one instance she had a consensual sexual relationship which she characterized as “rape” only in retrospect, because her sex partner was a guru-teacher who, in her view, should have known that she was especially vulnerable to his seductive invitation. From an interpersonal perspective, we might hypothesize connections with the self-destructive agenda of her self-critical and neglectful introject. We might speculate, for example, on the possibility that she takes unnecessary risks or ignores warning signals. It would be reasonable to wonder, from this view, to what extent her unfortunate sexual experiences and her auto wreck may have been facilitated by self-destructive motives. In contrast, from an information processing perspective, Ms. Smithfield’s apparent vulnerability might be understood as a side effect of dissociative defenses acquired
in the course of coping with repeated trauma. Such defenses promote inattention to dangers and interfere with learning from negative experiences. Individuals who rely on dissociative defenses have a vastly increased risk of being victimized as compared with persons whose defenses involve lesser distortions of information processing, a phenomenon Kluft (1990) has called the "sitting duck syndrome."

The overall challenge posed by the example of this case involves expanding models of recurrent relationship patterns into models for more comprehensive clinical formulation (Benjamin, 1994; Persons, 1991; Schacht, 1991b). Such comprehensive models would integrate interpersonal enactments with affective experience and information processing operations. Future developments in this area may be guided by Horowitz' (1987) "states of mind" model, which illustrates how information processing and interpersonal perspectives may be articulated. Benjamin (1994) has also done preliminary work on structural models of affective and cognitive behavior homologous to SASB that would also allow a model of an interpersonal pattern to be articulated with a comprehensive clinical formulation.

**METHODOLOGICAL CONCERNS**

**Sampling issues.** A "well-formed" relationship narrative includes information relevant to all the domains of the CMP structure. A minimally adequate raw sample is one which meets this criterion, and which contains a sufficient number of observations to permit confidence in the statistical stability of the data. Ideally, a sample would also include both reported interpersonal content and observed interpersonal process during the interview, to permit testing of hypotheses about the relationship of these two domains (e.g., role of "insight").

There is no assumption that the SASB-CMP method can be applied to extract a SASB-CMP from any interview. It is entirely possible to conduct an interview in which the interpersonal information remains vague or incomplete, making it impossible to generate a complete SASB-CMP narrative. Of course, a corollary potential advantage of the SASB-CMP method is that comparison of obtained information with the elements of the SASB-CMP structure permits precise identification of the nature of missing information. This may greatly assist an interviewer's attempts to gather data for a CMP formulation. The use of the CMP structure to track the presence or absence of relevant interpersonal information at any point in an interview may also permit study of hypotheses based on low-frequency as well as high-frequency events.

In contrast to methods like the CCRT (Luborsky, 1977; Luborsky & Crits-Cristoph, 1990) there is no assumption in the SASB-CMP method that the frequency

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7Such a criterion might be understood as analogous to the concept of a "mature" object representation (cf. Hartley, Geller & Behrends, 1988).

8One possible improvement in the way numbers are assigned to narrative data involves an integration of the SASB INTREX questionnaires with an interpersonal assessment interview. In this integrated assessment, after exploring a relationship issue in ordinary discourse, the interviewer and patient would then jointly complete a short-form INTREX rating of the described relationship. If the patient was reporting a change in a relationship, then the INTREX would be used to directly rate the change. This structured integration of an assessment interview and a standardized psychometric instrument would hopefully serve to provide maximum clarity to the interview data. This would hopefully minimize researchers' frustrating experience of examining a provocative but ambiguous therapy record and wondering "what did (s)he mean by that?" Further discussion of SASB as a change measure appears in Benjamin et al. (1986).
with which an interpersonal event is mentioned *per se* equates with importance. In the SASB-CMP method, investigators may elect to account for and integrate all data, not just high-frequency data. For example, it is possible that any consistent failure by the patient to provide information relevant to a particular SASB-CMP element (assuming adequate opportunity) could prove useful as an operational measure of the concept of "structural defect" in a patient's representation of interpersonal relationships. Thus, a patient who has adopted a rigid "victim" role may only describe others as acting from their own motives in a hostile manner (SASB surface 1). The "victim" may not perceive the possibility that others' hostility could be an evoked reaction to his/her own behavior (SASB surface 2). For such an individual, the SASB-CMP element "Acts of others, reacting to the patient" might lack data because this whole domain of interpersonal experience was de-emphasized in his/her representational world.

**Reliability.** The reliability of the basic SASB-CMP data is directly linked to the reliability of the underlying SASB coding, which has been reported to exceed .90 with properly trained coders. Only limited pilot investigation has been done on the reliability with which judges can assign the basic SASB-coded data to the SASB-CMP categories, since this process appears highly straightforward. In the study of a single case, with two postdoctoral fellows and two graduate students in clinical psychology trained as judges, three judges showed perfect agreement on all components, with a fourth judge disagreeing on one element of one component. No formal reliability studies have been conducted on the optional step of causal hypothesis generation from the SASB-CMP data.

**Validity.** Concurrent validity of the CMP with the CCRT was demonstrated in a single study (Johnson, Popp, Schacht, Mellon, & Strupp, 1989). Emerging data suggest that the interpersonal patterns captured by a SASB-CMP may be a valid complement to DSM-III/IV descriptive diagnosis (Benjamin 1987, 1994; Humphrey, Apple, & Kirschenbaum 1986; McLemore & Benjamin, 1979). Henry (1988) translated the DSM-III-R descriptors for Narcissistic Personality Disorder into SASB clusters. The result was a SASB-labeled description of prototypic narcissistic interpersonal transaction patterns. These SASB clusters were then organized and sequenced to construct a prototypic SASB-CMP for Narcissistic Personality Disorder. Henry then used the SASB system to code the content of a narcissistic patient's interpersonal transactions as described in an initial clinical interview. There was a close correspondence between SASB codes for the prototypic diagnostic criteria and codes for the actual patient. This demonstrates that a system designed for idiographic description (the SASB-CMP) may also serve research and training functions where ties to standardized nosology are desired.

The SASB-CMP shares two validity issues with all other methods for characterizing interpersonal patterns. First, with respect to construct validity, there is an unexamined assumption that it is desirable to describe patients with a single core theme.9 Because no method has been applied to a wide range of patients, it is not clear what problems would be encountered with patients whose relationship dynamics might be expected to be highly complex (e.g., multiple personality or borderline personality disorder). Similarly, nothing systematic is known about consequences of measuring interpersonal patterns across observational contexts (e.g., dyadic therapy, family therapy, naturalistic observation of relationships). Second,

9Horowitz' (1987) model of personality as a configuration of multiple "states of mind" offers a conceptual framework that appears able to admit more than one CMP per patient.
with respect to ecological validity, virtually nothing is known about the developmental aspects of empirically measured recurrent relationship patterns, either in terms of hypotheses about the etiology of interpersonal psychopathology or in terms of current developmental level. With respect to the latter, Hartley (1988) applied a system for assessing the developmental level of object representations (Hartley, Geller, & Behrends, 1988) to demonstrate that the same individual may function interpersonally at a variety of developmental levels depending upon the particular relationship examined. This suggests that while the transactional form of the SASB-CMP might be quite similar across relationships, the level of object representation underlying the behavioral enactment could vary.

APPLICATIONS OF THE SASB-CMP

The labor-intensive nature of SASB-coding probably renders the SASB-CMP most useful for detailed case analyses. Potential applications of the SASB-CMP relate to patient diagnosis, treatment planning, prediction of therapeutic process, and measurement of change.

**Change measurement.** The SASB-CMP presents numerous opportunities for use as a change measure. For example:

1) Changes may occur in the distribution of raw interpersonal data. For example, a patient prior to therapy might have difficulty thinking about and discussing transactional events in detail (an interpersonal equivalent of alexythmia?) A transcript of an interview with such a patient would have very little interpersonal content. Following therapy, however, such a patient might have acquired a more differentiated vocabulary for interpersonal events, as well as a heightened interest in them, so that the sheer amount of interpersonal content in his/her dialogue would be increased.

2) Changes may occur in the distribution of SASB-codes within the SASB-CMP domains. For example, a patient who never spoke of other people's wishes and fears could begin to incorporate these into his/her discussions of relationship episodes, or a patient who frequently discussed hating himself might no longer bring this up as a topic. Changes in the interpersonal make-up of specific CMP domains could be observed. For example, a patient whose introjective acts were only hostile might incorporate some self-nurturant SASB-codes. Or there might be changes in specific predictions, wishes, or fears. Changes in observed interpersonal process during the therapy session could also be noted here. For example, a patient might shift from a predominantly passive and submissive stance of waiting for therapist inquiry, to one in which (s)he took initiative and asked questions of the therapist.

3) Changes in the patient's relationship to their interpersonal patterns may be directly addressed. Specially designed locus-of-control or self-efficacy scales can be used, for example, to help patients rate the extent to which they feel able to interrupt transactional cycles and alter their "fate" in relationships. Patients may also be questioned about changes in the meaning of the pattern in their lives. For example, a patient whose participation in a particular interpersonal pattern had not changed might still feel better if (s)he had come to accept the wishes associated with the pattern.

10One such scale was created for use in the Vanderbilt II project. The Vanderbilt Interpersonal Locus of Control Scale (VILCS) consists of 24 items which tap each of the eight SASB clusters from three locus-of-control perspectives: chance forces, powerful others, or internalized control. Copies of the VILCS along with scoring instructions are available from the second author.
4) The SASB-CMP can be incorporated into a target-complaint method, in which a CMP formulation is used to negotiate treatment goals with the patient. Such an approach would be particularly suited to research on focused brief therapy. Subsequently, this same CMP formulation would be used as a benchmark against which the patient, therapist, and/or independent observers would rate changes. If understanding of the CMP evolved in the course of therapy, so that the initial formulation and goals were altered, these changes could be tracked and accommodated. In this context, a SASB-CMP may constitute an alternative theoretical base for defining the nature of patient plans in "plan compatibility" research (cf. Sampson & Weiss, 1986). Related efforts using SASB have been reported by Benjamin (1982, 1985, 1987) and Henry, Schacht, & Strupp (1986).

**Integration with manual-guided treatment research.** In addition to service as a change-measurement tool, SASB has also been proposed as a guiding heuristic for a form of treatment called SASB-Directed Reconstructive Learning Therapy (Benjamin, 1991, 1993). As part of training in a manual guided therapy, the SASB-CMP structure may be used to guide inquiry into patients' interpersonal behavior by ensuring systematic sampling of all relevant interpersonal domains. When applied in this way as a heuristic over time, the SASB-CMP encourages development of precise linking interpretations based on principles of interpersonal complementarity, similarity, antithesis, opposition, and introjection. These interpretations, in turn, may become the focus of subsequent formulation-based research (cf. Persons, 1989; Schacht, 1991b). Furthermore, it seems possible that using the SASB-CMP to guide inquiry may have direct therapeutic benefit in itself. To the extent that inquiry structured by the SASB-CMP is more complete and organized than ordinary inquiry, it may model a more differentiated and complete interpersonal thought process for the patient to internalize. This hypothesis is clearly testable.

Finally, the SASB-CMP model itself, as opposed to the specific information generated with it, may be useful in research on therapist training. Schacht et al. (1984) and Butler and Binder (1987) discuss the clinical utility of the CMP model as a heuristic for clinical formulation. However, virtually nothing is known empirically about when in the course of a therapist's training it is most useful to learn such a heuristic, or about the effects of learning and using such a heuristic on therapist's ongoing thinking and behavior (cf. Henry, Strupp, Butler, Schacht, & Binder, 1993, and Henry, Schacht, Strupp, Butler, & Binder, 1993). Efforts to train therapists in use of the SASB-CMP may provide an explicit research scaffold for tracking therapists' development from novice to expert (cf. Schacht, 1991a). Improved therapist training is clearly needed if the methodological promise of manual-guided psychotherapy research is to be fully realized.

**REFERENCES**


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