

USING THE IMPACT MESSAGE INVENTORY-CIRCUMPLEX VERSION TO MEASURE OBJECTIVE COUNTERTRANSFERENCE

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Brief Conceptualization

The first decision to be made in studying therapist countertransference (CT) is to determine whether your focus is on “subjective” (classical, irrational, unhelpful) or “objective” (helpful, rational, transactional) CT. In a recent publication I outlined in some detail how an investigator can define and operationalize each of these constructs (Kiesler, 2001). Study of subjective CT presents more assessment complexity and will not be focused on here. Instead, I restrict my discussion below to the use of the Impact Message Inventory-Circumplex Version (Kiesler et al., 1985; Kiesler & Schmidt, 1993) to study objective CT.

Each of the two CT types refers to a hypothesized particular form and pattern of the therapist's experience and actions occurring with a particular patient. Objective CT (Winnicott, 1949) refers to “the constricted feelings, attitudes, and reactions of a therapist that are induced primarily by the patient's behavior and that are generalizable to other therapists and to other significant persons in the patient's life” (Kiesler, 1996, p. 230). In the case of objective CT, a large percentage of the variance in a therapist's feelings toward the client is attributed to the recurrent evocative pattern of the client's behavior during the therapy sessions.

In contemporary interpersonal theory, “the equivalent of objective countertransference is the complementary response being pulled for so expertly and tenaciously by the patient during their sessions” (Kiesler, 1996, p. 230). Interpersonal complementarity refers to the process by which our interpersonal actions “invite, pull, elicit, draw, entice, or evoke ‘restricted classes’ of reactions from persons with whom we interact, especially from significant others” (Kiesler, 1983, p. 198). Individuals attempt to influence others into confirming their familiar and preferred transactional patterns, to affirm and validate their self-concepts or chosen style of living and being. When interactants respond with complementary responses that, in turn, lead to a repetition of the person's original and preferred interpersonal patterns, they confirm the individual's self-presentation.

Within contemporary interpersonal theory, complementarity is defined in terms of specific interpersonal behavior as operationalized on the two-dimensional interpersonal circle or circumplex (Kiesler, 1983, 1996). Complementarity occurs on the basis of “reciprocity” in respect to the control dimension or axis (dominance pull submission, submission pulls dominance) and “correspondence” in regard to the affiliation dimension (hostility pulls hostility, friendliness pulls friendliness) (Kiesler, 1983). A maladjusted person's interpersonal acts are both more extreme and more rigid than a normal person's behavior. Their extreme interpersonal behaviors are constricted to only a few classes of the total range of possible interpersonal behaviors and tend to be expressed invariantly across situations and interactants. Maladjusted individuals thereby exert more influence in interpersonal interactions, more forcibly pull for complementary responses from significant others and from therapists.

The two-dimensional interpersonal circumplex (Kiesler, 1983, 1996) depicts 16 categories of interpersonal behavior around the axes of control (dominance vs. submission) and affiliation (friendliness vs. hostility). Available interpersonal circumplex inventories typically measure eight octants (each combining two adjacent sixteenths) that fall around the circumference of the circle: dominant, hostile-dominant, hostile, hostile-submissive, submissive, friendly-submissive, friendly, friendly-dominant).

An interpersonal circumplex inventory used especially in studies of psychotherapy and medical interactions is the Impact Message Inventory-Circumplex Version (IMI-C; Kiesler et al, 1985; Kiesler and Schmidt, 1993). The IMI-C measures the *covert complementary responses* interactants distinctively experience when transacting with a particular person: the cognitions, emotions, and action tendencies evoked, for example, in the therapist by a particular patient's interpersonal pressures. Table 1 provides examples of items from the 56-item IMI-C.

Table 1. Sample Items from the Impact Message Inventory, Octant Scoring Version.

Octant Scale	Sample Item
	<i>"When I am with this person, she makes me feel...</i>
Dominant (D)	<i>bossed around."</i>
Hostile-Dominant (HD)	<i>that she thinks it every woman for herself."</i>
Hostile (H)	<i>distant from her."</i>
Hostile-Submissive (HS)	<i>that I should do something to put her at ease."</i>
Submissive	<i>I should tell her to stand up for herself."</i>
Friendly-Submissive (FS)	<i>that she trusts me."</i>
Friendly (F)	<i>welcome with her."</i>
Friendly-Dominant (FD)	<i>that she wants to be the charming one."</i>

A central component of my interpersonal communication theory (Ford & Urban, 1998; Kiesler, 1979, 1982, 1988, 1996) is that within their sessions the therapist's impact messages recurrently register a client's distinctive interpersonal problems (extreme and rigid actions). The patient-therapist interaction, despite its unique characteristics, is similar in major ways to any other human transaction. The therapist, at his/her end of the feedback loop, registers the patient's distinctive style and central problems through the impact messages he/she experiences with the patient – emotional and other impacts "complementary" to a distinctive cluster of behavioral categories on the interpersonal circle. Therapists initially simply cannot *not* be "hooked" into the patient's rigid and extreme maladaptive game of interpersonal encounter.

*Empirical Studies of Complementarity in Therapy (Objective CT)
Using the IMI-C*

A therapist can be confident his/her experiences and actions with a particular patient are "objective" CT -- reflect primarily the patient's major interpersonal difficulties -- "when his or her reactions to a client do not deviate significantly from the baseline reactions to the patient from colleagues or the patient's significant others – that is, when the therapist's colleagues, as well as significant others in the patient's life, report similar reactions to the patient. Discovery that professional colleagues and the patient's significant others experience reactions to the patient similar to our own constitutes major reassurance that our reactions as therapists are not emanating from our own subjective CT issues." (Kiesler, 2001, p. 1061).

To determine the presence and pattern of objective CT induced by a patient or group of patients, one measures IMI-C reactions to patients obtained from a set of therapists or supervisors and/or reactions to the patient obtained from a set of significant others (e.g., spouse, friends, work colleagues). Since a patient's behaviors are extreme and rigid, they should overdetermine the subjective impacts (feelings, action tendencies, cognitive attributions, fantasies) experienced by all of these interactants. Averaging IMI-C reactions from a group of therapists or significant others to a patient provides a reliable and generalizable baseline of objective CT evoked by the patient.

For example, a researcher wants to discover and describe the generalizable CT to female offenders as a diagnostic group. The researcher administers the IMI-C to a sample of therapists who fill it out on their respective female offender patients. The researcher then calculates the resulting mean octant scores for the therapist respondents. He/she may discover that the highest IMI-C octant scores for these women are hostile and hostile-dominant. Another researcher may want to explore objective CT reactions of a hospital's direct care staff when they interact with mentally retarded adults who are also diagnosed as having Borderline Personality Disorder (BPD). The hypothesis to be tested might be that the staff will report more intense hostile reactions when interacting with these patients than when interacting with mentally retarded adults who do not have BPD. The researcher then administers IMI-Cs to a sample of staff who have interactions with a group of BPD patients and to a sample of staff who have interactions with a group of non-BPD patients. The hypothesis is supported if the obtained IMI-C hostile (perhaps also hostile-dominant) octant scores for the BPD group of patients are stronger (higher) than the IMI-C hostile octant scores for the non-BPD group. T-test, ANOVAs, MANOVAs, or multiple regression analyses could then provide answers as to whether the differences between the groups are statistically significant.

In two large scale therapy studies, Hafkenscheid tested the interpersonal hypothesis that interpersonal impacts generalize across a sample of therapists and a sample of psychiatric nurses. Generalizability of impact messages across therapists was determined for different combinations of therapist pairs, independently rating a total of 131 psychiatric outpatients (Hafkenscheid, 2003) and for different combinations of psychiatric nurse pairs, independently rating a total of 53 psychiatric inpatients, most suffering with major depressive disorders alone or in combination with PTSD (Hafkenscheid, 2004 September). In both studies the generalizability of impact messages was operationally defined by the *intraclass correlation (ICC)* of raw IMI-C octant scores between two therapists (or two nurses) rating the same patients. Hafkenscheid used an index of "fairly generalizable across therapists or nurses" defined as only ICC values which reached statistical significance at 0.01 and which also reached or exceeded a minimum value of +0.50. Both studies found that impact messages were most clearly generalizable across IMI-C respondents (therapist and nurses) for the Dominant and Hostile-Submissive octants, and were generalizable to a less consistent extent (in one or the other study only) for the Hostile-Dominant and Friendly-Dominant octants. In contrast, the other four octants of impact messages turned out to be poorly generalizable across therapists. Hafkenscheid, after detailing possible causes of the limited generalizability of the latter octant impacts, concluded that empirical tests of objective CT using the IMI-C address a complex of potentially influential factors that needs to be unraveled in future investigations.

Researchers may be interested in examining the relationship between degree of complementarity (or objective CT) present within patient-therapist, patient-nurse, patient-physician, or other dyads and independent patient process or outcome variables. For example, a researcher might wish to test the hypothesis that during the middle (working) stage of therapy, higher complementarity between patient-therapist pairs (stronger objective therapist CT indicating "impasse") is associated with less successful outcome at therapy termination. The answer to this and similar questions requires that the researcher have both members of the dyads of interest (e.g., patients-therapists) fill out IMI-Cs at the same time on each other. The researcher then calculates complementarity indexes for each patient-therapist pair that, in turn, can be statistically tested for association with other variables (such as measures of successful patient outcome).

Complementarity index formulas can be calculated for (a) the control axis IMI-C score, (b) the affiliation axis score, and (c) for combined axes scores as a total. The Appendix at the end of this document (Kiesler, Schmidt & Wagner, 2004 July) provides step by step guidelines and formulas for calculating complementarity scores for IMI-C dyads. These transactional scores are then used to test predictions regarding complementarity (or objective CT) and other variables of research interest. In the case of all three IMI-C complementarity indexes, *low* scores signal *high* complementarity (with perfect complementarity being 0.00, or no deviation whatever from predicted circumplex octant orderings).

Until adequate norms become available for the IMI-C complementarity indexes in various psychotherapy or medical dyad samples, researchers do not have a precise basis on which to divide samples (e.g. therapists with anxiety disorder patients, therapists with dysthymic disorder patients) into

high versus low complementarity pairs for testing various hypotheses and predictions. In the meantime, researchers can use sample median split into high versus low complementarity (or objective CT) groups. In multiple regression or structural equation analyses the researcher simply analyzes the entire distribution of complementarity indexes for a particular sample.

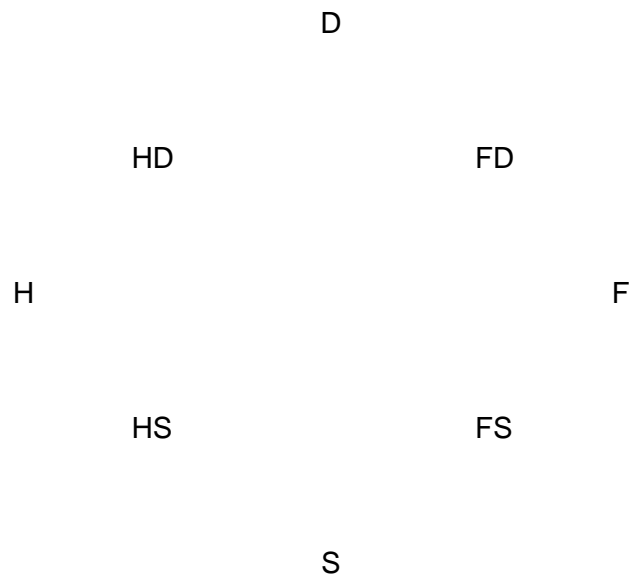
Other examples of IMI studies can be found in my 1996 book in Chapter Five on the Impact Message Inventory. I also refer you to a recent 2001 annotated bibliography of IMI studies (Kiesler, 2001 October) which you can download from the web page listed in the references below.

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APPENDIX
CALCULATING AXIS SCORES AND DYADIC COMPLEMENTARITY SCORES
USING THE EIGHT SCALES OF THE IMI-C OCTANT VERSION

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I. OCTANT SCORES

D = Dominant
HD = Hostile Dominant
H = Hostile
HS = Hostile Submissive

S = Submissive
FS = Friendly Submissive
F = Friendly
FD = Friendly Dominant

II. CALCULATING AXIS SCORES

$$\mathbf{CON} \text{ (CONTROL)} = D - S + .707 (HD + FD) - .707 (HS + FS)$$

$$\mathbf{AFF} \text{ (AFFILIATION)} = F - H + .707 (FD + FS) - .707 (HD + HS)$$

III. Formulas for Calculating Complementarity Between Dyadic Interactants' Interpersonal Behavior (C.C. Wagner, 2001)

An analysis of the degree of complementarity present between two interactants' sets of IMI scores (between their IMI profiles) is extremely important for tests of interpersonal theory and for general analysis of patterns present between a pair of interactants' interpersonal behavior.

We have found to be especially useful analyses of complementarity that use each of the interactant's Axis scores (Control, Affiliation) as well as their combined Axis scores (Control + Affiliation). The formulas below use Absolute scores ("ABS"). Subscripts "1" and "2" refer to the IMI scores from each of the two interactants. Subscripts "c" and "a" refer to "control" and "affiliation."

$$\begin{aligned}\mathbf{ABS}_c &= \text{ABS} (\text{CON}_1 + \text{CON}_2) \\ &= \text{ABS} [(\text{DOM}_1 - \text{SUB}_1) + (\text{DOM}_2 - \text{SUB}_2)]\end{aligned}$$

$$\begin{aligned}\mathbf{ABS}_a &= \text{ABS} (\text{AFF}_1 - \text{AFF}_2) \\ &= \text{ABS} [(\text{FRI}_1 - \text{HOS}_1) - (\text{FRI}_2 - \text{HOS}_2)]\end{aligned}$$

These absolute scores are then inserted into the formulas below to obtain the three complementarity scores : "reciprocity" complementarity on the Control axis, "correspondence" complementarity on the Affiliation axis, and "total" complementarity for all the interpersonal behavior categorized on the full interpersonal circle (control and affiliation).

$$\begin{aligned}\mathbf{COMP}_c &= \text{ABS}_c \\ &= \text{ABS} (\text{CON}_1 + \text{CON}_2)\end{aligned}$$

$$\begin{aligned}\mathbf{COMP}_a &= \text{ABS}_a \\ &= \text{ABS} (\text{AFF}_1 - \text{AFF}_2)\end{aligned}$$

$$\begin{aligned}\mathbf{COMP}_{\text{tot}} &= \text{ABS}_c + \text{ABS}_a \\ &= \text{ABS} (\text{CON}_1 + \text{CON}_2) + \text{ABS} (\text{AFF}_1 - \text{AFF}_2)\end{aligned}$$

In each case the score obtained characterizes "**deviation from complementarity**": that is, the higher the score, the less the complementarity present among the pair of interactants; the lower the score, the more the complementarity present among the pair of interactants. The possible obtainable range of scores for *total* complementarity is "0" (perfect complementarity) to "12" (maximum non-complementarity).

Comparison of the two separate axis complementarity scores (COMP_c and COMP_a) – "reciprocity" in control, "correspondence" in affiliation – helps the investigator determine which of the circle axes is contributing more to the level of total complementarity (COMP_{tot}) obtained. In some cases, complementarity may be found primarily for only one of the axes, but not for the other axis or for total complementarity. Some previous complementarity studies (e.g. in psychotherapy) have shown that it is crucial to examine the axes separately to tease out the (e.g. client-therapist) patterns that are present.