The Social Brain Model for Psychiatry: Historical Background

Research Committee
Group for the Advancement of Psychiatry (GAP)

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Other committee members: Beverly Sutton, John Beahrs, Fred Wamboldt, Alan Swann, Jacob Kerbeshian, Johan Verhulst, Michael Schwartz, Carlo Carandang, Doug Kramer, Morton Sosland

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Group for Advancement of Psychiatry (GAP)
Research Committee History

The GAP Research Committee:
- Possesses distinguished history
- Significant past contributions
  - Family research and therapy
  - Schizophrenia
  - Rehabilitation psychiatry

Previous chairman included:
- Jerry M. Lewis
- Robert Cancro
- Zebulon Taintor
Beginning

Gardner, Koliatsos, & Dorn met Nov 1996 & listed 8 principles for a basic science of psychiatry

1. Psychiatry now has no basic science in the medical pattern through which the diseases represent dysfunctional variations of normal body processes

2. But such pathophysiological mechanisms should be sought as a primary aim of our work
Onset principles (ii)

3. Cellular-molecular processes are variations at another conceptual level of activities of the whole organism notably and powerfully including its social arrangements which we agreed on are largely mediated by the brain.
Onset principles (iii)

4. Emergent properties at the higher levels of the organism can’t be predicted by full & complete knowledge of the “lower” level although reductionist attempts to explain the phenomena partially in this way is a powerful conceptual and scientific endeavor
Onset principles (iv)

5. Top-down and bottom-up approaches to investigating such pathology refer to integrative approaches that contrast to the top-up avenue that considers only behavior & the bottom-down avenue that considers only cellular-molecular activities.
Onset principles (v)

6. Conceptualizing basic plans that are putatively foundation to both pathology and normality is a highly useful exercise.

7. That is, pathology is highlighted when the behavioral state is deployed at the wrong time and wrong place or normality if it works to enhance an individual’s adaptation.
Onset principles (vi)

8. This distinctly differs from the often inadvertant “pathologizing” of normal behavior; thus to talk of a leader as manic or hypomanic when describing his or her elated, animated, energetic, and sleepless ways is wrong in that the basic plan involved is then undercut and underemphasized; leaders are not pathological unless there is something disadvantageous and maladaptive about the way it is expressed.
GAP Research Committee Consensus Statement

▶ Academic Psychiatry 2002;26: 219:

- The Social Brain: A Unifying Foundation for Psychiatry
- By (listed alphabetically): Cornelis Bakker, Russell Gardner, Jr., Vassilis Koliatsos, Jacob Kerbeshian, John Guy Looney, Beverly Sutton, Alan Swann, Johan Verhulst, Karen Dineen Wagner, Frederick Wamboldt, & Daniel R. Wilson
Transition: added background

► Guests had included Robert Michels, Zebulon Taintor, J. Anderson Thomson, Wagner Bridger, & Michael Schwartz

► Residents-in-Training who have been GAP fellows and served as committee members are Vassilis Koliatsos, Thomas Shoaf, John Barker, Morton Sosland & Daniel Mayman. Another guest resident-in-training not a GAP fellow was Betsy Ciarimboli
The Research Committee of the Group for Advancement of Psychiatry (GAP), a specialty think-tank, has addressed psychiatry's need for a unifying scientific foundation.

- Such a foundation would consider the disorders commonly treated by psychiatrists in terms of the physiological baseline from which they depart, much as heart disease is understood as deviation from normal cardiac function.
- The relevant physiological focus for psychiatry is the social brain.
Definition of Social Brain

► The social brain is defined by its function; namely, the brain is a body organ that mediates social interactions while also serving as the repository of those interactions.

- The concept focuses on the interface between brain physiology and the individual's environment.
- The brain is the organ most influenced on the cellular level by social factors across development; in turn, the expression of brain function determines and structures an individual's personal and social experience.
Organizing Metaphor

The social brain framework may have greater direct impact on the understanding of some psychiatric disorders than others.

- However, it helps organize and explain all psychopathology.
  - A single gene-based disorder like Huntington disease is expressed to a large extent as social dysfunction.
  - Conversely, traumatic stress has structural impact on the brain, as does the socially interactive process of psychotherapy.
Brains, including human brains, derive from ancient adaptations to diverse environments and are themselves repositories of phylogenetic adaptations.

- In addition, individual experiences shape the brain through epigenesis, i.e., the expression of genes is shaped by environmental influences.
  - Thus, the social brain is also a repository of individual development.
- On an ongoing basis, the brain is further refined through social interactions; plastic changes continue through life with both physiological and anatomical modifications.
Contrast to Biopsychosocial

► In contrast to the conventional biopsychosocial model, the social brain formulation emphasizes that all psychological and social factors are biological.

► Non-biological & non-social psychiatry cannot exist.
  ▪ Molecular and cellular sciences offer fresh and exciting contributions to such a framework but provide limited explanations for the social facets of individual function.
Requirements of Model

The social brain formulation is consistent with current research and clinical data. Moreover, it ultimately must:

- unify the biological, psychological and social factors in psychiatric illness,
- dissect components of illness into meaningful functional subsets that deviate in definable ways from normal physiology,
- improve diagnostic validity by generating testable clinical formulations from brain-based social processes,
- guide psychiatric research and treatment,
- provide an improved language for treating patients as well as educating trainees, patients, their families and the public, and
- account for the role of interpersonal relationships for brain function and health.
In conclusion,

- The concept of the brain as an organ that manages social life provides significant power for psychiatry's basic science.
  - Burgeoning developments in neural and genetic areas put added demands on the conceptual structures of psychiatry.
  - Findings from such incoming work must be juxtaposed and correlated with the behavioral and experiential facets of psychiatry to give it a complete and rational basis.

- Psychiatry's full and unified entry into the realm of theory-driven and data-based medical science has been overdue.
  - The social brain concept allows psychiatry to utilize pathogenesis in a manner parallel to practice in other specialties.

End of quote from Academic Psychiatry 2002
What’s the problem?

► If we propose the social brain conception as a solution, what is the problem?
  ▪ Psychiatry’s quick change in conceptual base that took place over the last half of the twentieth century.
Turnaround Summarized.

- 20th century research on drugs & definition of disorders altered professional & public opinion so that psychiatry turned a sharp corner with massive changes in practice over 1/4\textsuperscript{th} century

- Many reasons contributed
  1. Discontent with unsupported theories for how its disorders had resulted and should be treated, a situation differing from the rest of medicine more secure in its heritage and approach to science.
More facets of quick turnaround

3. Operationalized definitions of disorders provided checklists for diagnosis
   - Many use besides psychiatrists with little attention to niceties
   - Limited by often arbitrarily worked out clinical approximations

4. Professionals & public learned that new & powerful medications possessed striking efficacy
   - Sophisticated drug trials made findings persuasive
   - More gradually, powerful side effects also gained attention
     - Clinical guidelines more cautious about drug therapy
Transformation continued

6. Unsupported undocumented treatment model blamed “crooked or insufficient molecules”
   ► Pharmaceuticals appeared as verified packaged therapies
     ► Cheap because “less expensive” professional time
   ► Resulted in the now standard “med-check”

7. Reluctance to fund professional treatment pervaded medical scene

8. For therapies not using drugs, payers noted that people other than psychiatrists could do the work.
   ► With less expensive training, they could charge less
   ► Or happily accept lesser fees from 3rd party payers
Goal of “relationshipless” psychiatry gained standing

- “Better business” results if same or adequate results come from cheaper packaged treatment for molecular deficiencies,
  - e.g., “chemical imbalances,”
- Brief physician visits combined with non-physician therapists for non-drug treatments
“Untoward side effects”

► These accompanied benefits from massive business-focused transformation of psychiatric medicine

► Deficient core metaphors hold sway

  ▪ For psychiatrists, other professionals, the business ends of payers, multinational corporations and the public
  ▪ Specialty deprofessionalized
    ▶ With lessened results for patients
“Untoward side effects”

► Popular metaphors focus on a molecular level of analysis that possesses no support in research findings.

► Other subsequently developing data underline the importance of utilizing an alternative, multiply layered model of the central organ of psychiatry that we label the “social brain”.
Problems: Norbert Enzer

"... When I began as an oral examiner in both General and Child Psychiatry [about 1970], I fretted about the narrowness of candidates’ knowledge in the sciences basic to psychiatry and their reliance on impressions and poorly documented, often very limited, experience, unsubstantiated theory, or fuzzy clinical data."
“As I step aside, my concerns are quite different. Now I am distressed by the rigid, often insensitive, approach of so many candidates towards patients, their preoccupation with the details of diagnostic criteria, their focus on trivial information and seeming lack of concern for or understanding of the unique person who is their examination patient.”
Plan

► Present state of affairs compare
  ▪ with those of approximately a quarter century ago using the dimensions of
    (1) *the nature of knowledge* (theory vs data-based)
    (2) *clinical skills in application of professional knowledge* (open-ended vs checklist-based interviews)
Nature of Knowledge

► Earlier, relevancy stemmed from theory.
  ▪ Theory = professionally applicable information came from a framework of detailed accumulated opinions about mind-workings
  ▪ Established facts did not prove nor disprove speculation

► Stemmed from psychoanalytic theory
  ▪ From Freud’s & others’ work with relatively few patients
Results of Theory-Based Thinking

Viewed retrospectively, extrapolating to more general conclusions entailed significant risk for the durability of the conclusions.

Not all of the American psychiatry’s accumulated knowledge a quarter-century ago involved such theory.

But those components holding greatest sway did until well after mid-century – augmented by leadership in academic departments.
Clinical skills

► Complex “metapsychology” theory failed to foster or to even allow measurements by standard scientific methods.

► Nevertheless we feel that it led to clinical skills that assessed reasonably well the structure and function of patients and their minds through depth-interviewing.

► Psychiatric clinicians gained expertise in interviewing.
Core clinical skills gained in this manner helped establish trusting alliances with patients and assessed mental functioning at multiple levels.

A common belief held that some individuals had more innate abilities for interviewing in depth.

This echoes present research on psychotherapy effectiveness – now massive in quantity – that people vary considerably in such effectiveness.

- For example, possession of a "third ear" once positively described an able therapist or an apt student.
By contrast, research on psychotherapy had previously assumed that psychotherapy could be studied using a drug study model. This metaphor:

- Held that a “pure preparation” of psychotherapy
  - Parallel to a chemical compound
- When identically applied, caused a same result
Psychotherapy Research Results

► Bruce Wampold surveyed controlled psychotherapy research:

  ▪ Showed “medical model” of psychotherapy, as he calls it, emphatically does not resemble the mechanical ideal;
  ▪ Does not resemble antibiotic-like results

► Research results confirmed treater-variability indeed plays major roles in outcome
Why variability in treater-talent?

► Ability to understand another person in depth may relate to early pain in the helper’s life

► Lives of mental health professionals shows many suffered psychological pain

► Does such developmental pain make one more sensitive to the patient?
Clinical Skills

► However the student learned clinical skills, desired abilities:
  ▪ Hinge on skill in depth-interviewing
  ▪ Clinician understanding at multiple levels

► Most importantly:
  ▪ How did the clinician come to resonate with how the patient felt?
  ▪ How to connect “inside the patient’s skin”?
Social Fears of Psychiatrists

Lay people showed awareness of this kind of skill in the common fear about psychiatrist professionals:

- In past times, people in social situations feared that a psychiatrist would “read” their minds
- Less often encountered presently
Things Have Changed.

► Now psychiatry possesses a body of knowledge based more on a reliably ascertained data-base (descriptive psychiatry)
► Data categorize symptoms
► On check lists this means that clinicians make consistent diagnoses systematically
  ▪ Less information missed from open-ended, free-flowing interviews typical of the psychoanalytic-psychotherapeutic interviewing style
Things have changed (ii)

► Present clinician takes into consideration advances
  ▪ Brain function at anatomical, chemical & molecular levels
  ▪ Plus on behavioral and interpersonal levels

► A current trainee in psychiatry must amass enormous amounts of data from disparate disciplines to understand patient problems
Qualities of Change

► Field changed
  - From theory-derived clinician sensitivity to individual patient
  - Moved to use of empiric data on other patients

► New data that the clinician must now use changed the optimal interview:
  - Instead of interviewing in depth with understanding on multiple levels, the clinician uses a criteria-list interview
Fear of psychiatrist changed

► A new common fear about psychiatrists illustrates the change:
  ▪ The lay public knows so well the *Diagnostic and Statistical Manual* that

► New social connections now worry, “I am afraid you will find me in ‘the book’.”
Four Examples

- Other examples illustrate change over time
  - Show pendulum-swing extremes

- Pendulum-swings may stem from a lack of a core prevailing metaphor
  - Such might dampen swings
  - The “social brain” model or image may do this
Example 1: John Looney in training

- Committee member John Looney recalled training in a psychoanalytically based child study center.
- Parents of children referred to a prestigious preschool day program often had professional status at the nearby university.
- All understood that study of the children would entail psychoanalytic techniques during day care.
- Study framework for a given child entailed the Metapsychological Profile, a detailed instrument for plotting of the topographical structure of the mind.
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The Trainee Presents

Looney presented to intimidating professors a 70-page profile of a 5-year old boy

- Framework for detailed description included structural components of the boy’s mind and his commonly used mechanisms of defense
- Results to guide a plan for treatment using frequent analytically oriented sessions
The Followup

► After rotating off, Looney queried a successor colleague
  ▪ Team members had felt embarrassed
  ▪ When the child’s pediatrician diagnosed attention deficit hyperactivity disorder
    ► Put the child on methylphenidate
    ► With rapid marked improvement in all areas.
  ▪ Looney had made good empathic contact with the child and understood him on multiple levels,
    ► Yet the framework had reduced formulation-adequacy
► This illustrates one extreme of a pendulum swing
Candidates seemed stuck in *DSM*

- When Oral ABPN Boards were still done
  - According to board examiners additional to Enzer (quoted at the beginning)
  - Patients gain understanding only with respect to how they meet criteria for particular diagnoses

Candidates possess little understanding of patients “as people”

- Show small interest in how patients feel
Example 2. Looney in present practice

► A prestigious professor in another department asked for referral after losing his wife
  ▪ Felt sad, had lost function.

► Referral to highly regarded younger colleague
  ▪ Recent graduate from that training program
  ▪ Special interest in mood disorders
Result of referral

► When queried later, the professor told his troubled annoyance:
  ▪ Had been interviewed for twenty minutes
    ► Then received prescription for an SSRI
    ► Took SSRI and experienced modest relief

► Patient felt absence of something fundamental:
  ▪ “I went hoping she would understand my pain
  ▪ “Understanding my pain did not mean giving me Prozac and seeing me a month later”
Example 3. Experienced Psychiatrist

► Experienced psychiatrists shifted to descriptive, data-based practice

► A young man plaintiff in a medical malpractice lawsuit against a hospital psychiatrist:
  ▪ Felt mistreated when under behavioral restrictions
    ► Wished to “get back” at the treating psychiatrist

► Experienced evaluating psychiatrist did not recognize demonization of the hospital clinician
  ▪ Contrastingly idealized the evaluating doctor
    ► Both typify patients with Borderline Personality Disorder
Evaluation Used Checklist

► Patient’s attorney argued:
  - Patient developed PTSD and Borderline Personality Disorder from the hospitalization.

► The evaluator confirmed this
  - Simply went over checklists, noting criteria
  - Did not use in-depth interview
    - Evaluating psychiatrist overlooked neediness and dependency
  - These plus the idealization meant that the patient wished to please the evaluator
    - Answered affirmatively questions put to him
Deleterious Outcome

► This mistake caused him to testify contrary to other evaluating psychiatrists
  ▪ Who had done detailed and careful interviews aiming at as much objectivity as possible

► The jury accepted not the checklist conclusions but the more extensive findings
Example 4. Jerry M. Lewis Report

► I interviewed a middle aged man clearly showed depression at a conference
  ▪ despite a smile on his face
► After we chatted about the conference, I told him that I wished to try to understand how it felt to him, what was it like inside
► “First of all, you’ve got to understand I’m a recovering alcoholic.”
Querying Feelings

► JML: “And how does it feel for you to be a recovering alcoholic?”
► Patient: “Well, I don’t know – that’s just who I am. First and foremost I’m a recovering alcoholic.”
► JML: “More than anything else you feel yourself to be a recovering alcoholic.”
► Patient: “Yes.”
Sitting with the Feelings

► JML: “Can you help me understand what else there is, what in addition it feels to be you.”

► Patient: “Well, let me think. I guess next I’d say I’m depressed. I’ve got what they call a major depression –.”

► JML: “And that feels bad – ”

► Patient: “Yeah.”

- Tears come to his eyes, smile disappears, sighs deeply
- Silence grows—his silence fills the conference room.

► After seconds, JML: “I can feel the silence now.”
The DSM “Cover”

► We sit there quietly and move from sadness

► JML: “Let’s see if I’ve got it right. Inside – what it feels like to be you is that you’re a recovering alcoholic and you’re depressed.”

► Patient: “Yeah, doctor, you’ve got it.”

► JML: “Is there anything else about what it feels like to be you?”

► Patient: “No, I think we covered it all.”
Inferred Previous Experience

► Patient’s prior experiences with psychiatrists molded an expectation:

► Psychiatrists wish to understand patients as diseases

► Parallel to “the gall-bladder in room 307”
  ▪ A designation familiar from most doctors’ training in teaching hospitals
Outside Forces

► A psychiatrist evaluating for a lawsuit using only a *DSM-IV* check-list
  - Shows effect of legal system on practice
  - Criteria-based presentations in court make easier arguments for binary legal settlement
  - So legal system embraced *DSM-III*+
Financial Factors

- Constrictions in the financial support for psychiatric services impacted practice
- Third party payers care little about the depth of understanding
  - Does not matter whether a psychiatrist develops an understanding of the patient
  - Nor patient gaining more understanding
Business Model of Care

► Assume pathology located on molecularly:

► Criteria-based assessment → medication

  ▪ Reduced clinician cost when done quickly
  ▪ Model for much 3rd-party reimbursement
  ▪ Document minimally adequate result
  ▪ Minimum cost → good business
Perfect Storm

I. *DSM*-change

II. Prevailing medication use

III. Changed health care economics

- These resulted in changed present practice
  - Facilitated by industry-fostered molecular metaphors
  - These also pervaded all medicine
Paradox

- Economic factors foster de-emphasis of interpersonal skills and talents
- But empathy, ability to relate to people, warmth, a positive personality
  - Turn out to weigh heavily in controlled psychotherapy results
  - Play important roles in various practice modes
Baby Thrown With Bathwater

Psychiatry turned rapidly and unwisely from wisdom learned earlier under the influences of theory-driven practice

- A baby thrown out with the bathwater
- Adding to this, molecular metaphors
  - Widely accepted though unsupported
  - Facilitated acceptance of widespread drug-use
- Rationales for limiting reimbursements hastened transition
Educated Social Brain

► Yet social skills of a good clinician stem
  ▪ From that person’s educated social brain,
► A body-organ conditioned and shaped
  ▪ Over evolutionary time as well as
  ▪ Within the lifetime
  ▪ Including the experience of professional training
Psychiatric Disorders = Social Problems

► All psychiatric disorders represent variations in social interactions

► These hinge on variations in development and

► Malfunction of the social brain organ.
  - See other chapters for more detail
Educational Requirement

Psychiatrists need to know the social brain organ in greater depth

- On all levels of analysis and
- Then to turn that knowledge
- And learn more adequately problems of troubled people as well as
- To treat them more skillfully and effectively
Irreversible Changes But

► A ratchet-wheel turn makes old style leisurely interviews historical

► But even brief contacts with patients reflect enormous information-exchanges
  ▪ This includes how that the social-focused organ works in the body of the patient as well as
  ▪ In the body of the clinician

► Plus more accurate and telling metaphors may augment more appropriate practice
References:


