EEG Notes

1-20-55

1) Epilepsy leads have more bursts than others

2) What affects bursts — HV seems to decrease burst activity in some, increase it in others.

3) Beta (Gometz) is more persistent in temp leads, disappears faster in (1-4), (2-7)

(4) How about a burst of index vs. a background?

(5) Is there a correlate between tension in Pre-EST record and response? How does it change?

What influences it?

EEG Note.

1-23-55

⑥ As record is more disturbed,
Δ irreg burst → Δ regular burst

of Cohen
Gladstone.

? Mechanism

10	8
15	13
20	16%
25	~~20~~
30	25%
35	30
40	34%
45	38%
50	42%
55	46
60	50

---

① Correlation of brain changes felaring EST and the Symp. reactivity system.

② Set up a scale of reaction of EEG to EST

Type I - minimal

II - Δ Burst irreg.

III Δ Burst, Slow, irreg.

③ Symp. of brain changes who ~~out~~ Rx act Δ 2x/wk

1/30/55

EEG - EST

If delta activity has an early appearance - = O.M.S.

If so, pt is clinically changed, usually becoming euphoric, hypomanic generally. This is = "improvement"

Discharged early ± Psych Rx

Does improvement persist ?

Must have rating scales + improvement follow + Follow up.

Patients with High Delta Activity during Second, Third weeks of treatment.

		Clinical Rating		
EEG Delta		Much Improved	Moderately Improved	Unimproved
Both High	(18)	12 (67%)	4 (22%)	2 (11%)
One High	(16)	4 (25%)	8 (50%)	4 (25%)
None High	(20)	6 (30%)	7 (35%)	7 (35%)

Patients with High Delta Activity during Second, Third Weeks of Treatment.

		Clinical Rating		
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Both High	(18)	12 (67%)	4 (22%)	2 (11%)
One High	(16)	4 (25%)	8 (50%)	4 (25%)
None High	(20)	6 (30%)	7 (35%)	7 (35%)

[EST #2,3,4 - 1956-57]

Patients with High Delta Activity during Second, Third weeks of treatment.

		Clinical Rating		
EEG Delta		Much Improved	Moderately Improved	Unimproved
Both High	(18)	12 (67%)	4 (22%)	2 (11%)
One High	(16)	4 (25%)	8 (50%)	4 (25%)
None High	(20)	6 (30%)	7 (35%)	7 (35)

Clinical Ratings Compared to EEG and Amobarbital Test Results

	Much Improved	Moderately Improved	Unimproved
High Delta and Positive Amobarbital (29)	25	3	1
Either High Delta or Positive Amobarbital (26)	10	11	5
Neither High Delta nor Positive Amobarbital (36)	5	10	21

[EST #1 - 1956]

Clinical Ratings Compared to EEG and Amobarbital Test Results

	Much Improved	Moderately Improved	Unimproved
High Delta and Positive Amobarbital (29)	25	3	1
Either High Delta or Positive Amobarbital (26)	10	11	5
Neither High Delta nor Positive Amobarbital (36)	5	10	21

Clinical Ratings Compared to EEG and Amobarbital Test Results

	Much Improved	Moderately Improved	Unimproved
High Delta and Positive Amobarbital (89)	25	3	1
Either High Delta or Positive Amobarbital (26)	10	11	5
Neither High Delta nor Positive Amobarbital (36)	5	10	21

EEG Delta - Amobarbital Test

	EEG Delta Activity Records		
	High	Middle	Low
Amobarbital Test			
Positive (45)	29	8	8
Negative (46)	10	16	20

[EST#1 - 1956]

EEG Delta - Amobarbital Test

	EEG Delta Activity Records		
	High	middle	Low
Amobarbital Test			
Positive (45)	29	8	8
Negative (46)	10	16	20

EEG Delta - Amobarbital Test

	EEG Delta Activity Records		
	High	middle	Low
Amobarbital Test			
Positive (45)	29	8	8
Negative (46)	10	16	20

EEG Delta - Amobarbital Test

		EEG Delta Activity Records		
		High	Middle	Low
Amobarbital Test				
Positive	(45)	29	8	8
Negative	(46)	10	16	20

Conrad
Kohn

Memory - EST

9-16-57

Group Conf.

Korin

EST pt - question asked before, after 10-12 R
" what upset brought you to the hospital?

Change ratings - defined relat- of memory loss & Dy.
" Dep " - questionable " & " " " " Dep

(Memory loss test done between 7-12 R)

EEG clg. @ 10-12 gave no relat & memory loss
i.e. Pt c ~~Hyst~~ Complete loss - 9x2 ~~complete~~ Hyst + Hyst pt.
Portal 862 " "
No loss 752 " "

Anal. cg. w EEG. Complete = 84 % +
No loss = 372 +

This is basically the language response similar to the first
question of the amnestic test.

Cl cyn threshold = Chol Sed thres
Sed thres- curve

Anal: Further study in animals

7-15-57

Corp

Thresholds— .90 x .2 → 110 x .4

1) 90% 140 x .2 or less

4) Taking the threshold value & the eventual EEG response there is no relation of
reduced & high EEG deviations to the ±12 group

3) High threshold gave 2M, 2L, 2H } response in the ±12 group

4) Initial threshold higher in older person.

5) threshold rises during R

A. Flat (4)

B Increase the Plateau (5)

(18 Pts) a) No correl + EEG

C. Good size Phenylhex (4)

D. " " to reappear + flatten (3)

E. Turned use to help (2)

6. No relation of total response found to EEG induced flow

7) Flat curves were seen in 5/6 pts who had abnormal EEG (No drop)
well groups

Yelow
Rosebuds
Pennel
C Hooker

7/8/57 Conf

J. Scale

a) 1) Relation of J to Educat.

2) Older under. Taylor J (reflecting ed)

3) Hyl J = EST

4) Eot Emp = EST

b) J scale eq ē EST. Conv = unc. J scale

c) Further studies

a) J scale ē Ed corrl.

b) " " IQ

c) "Imp" ē J scale w EST, ICT

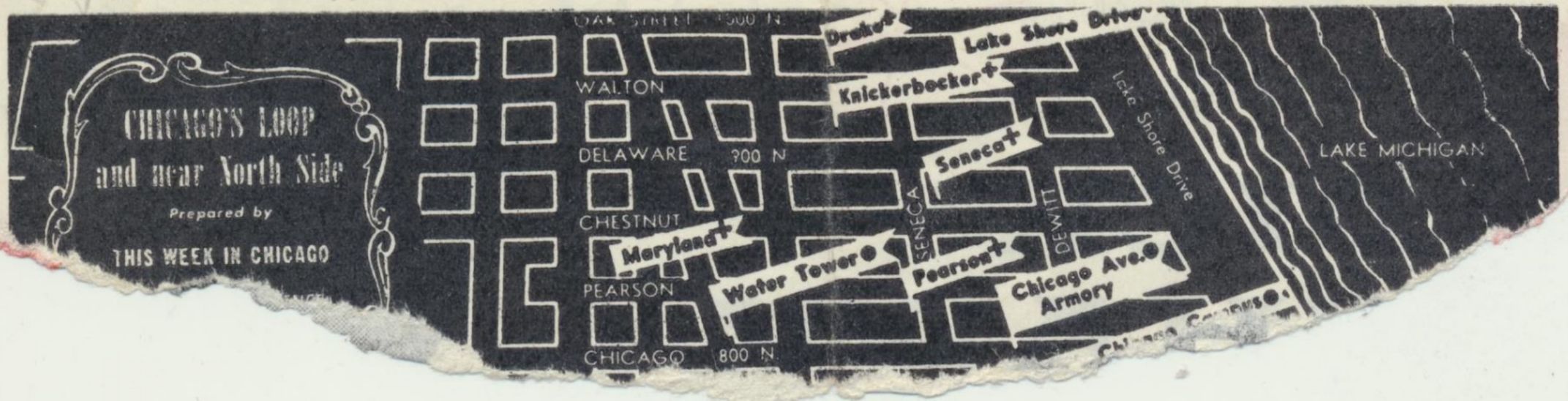
d) J scale + M-O-R

e) " " Physiol Emp.

Carl Yastrow
Rueckert-
Reuser

Sed threshold – nystagmus –
measured nystagmus +
pll of correlation limits

Fremont-Smith –
EPI in Psychoses



Note to Ed Re: Noo meeting ← note to Shagass

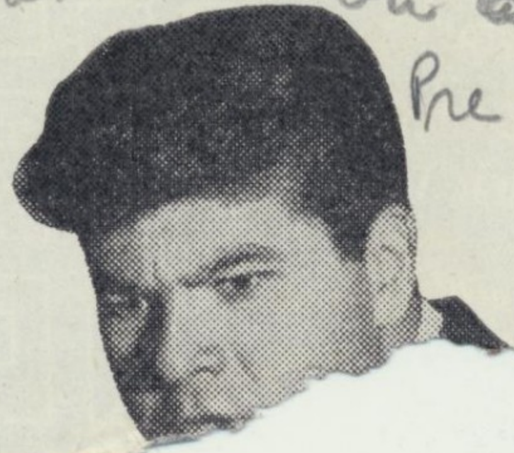
Neuro clinic once/wk

Conf Epi in Psych at Dallas

Drowsiness - EEG & Sed Thres

Sed Thres & to abn EEG ?

Pre EEG type



DICK SHAWN

MURRAY HILL 6-2077

S. F. KURZER

VICE-PRESIDENT IN CHARGE OF SALES

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MEDICAL PUBLISHERS

381 FOURTH AVENUE
NEW YORK 16, N. Y.

Dr Richard Orr

Pancreston - word - all - explanial
(like panacea)

Language Correlates of EES Change

Illness represents the pathologic
behavior of the organism mainly using
goals, defending itself against
dangers (int + ext) (real + imag)
which it perceives in true (distorted)
perfections.

Morrison HOTEL — CHICAGO

WILLIAM HENNING RUBIN
PRESIDENT

JOHN B. GRANDE
GENERAL MANAGER

FAMOUS FOR THE **BOSTON** *Oyster House* WHERE FAMOUS PEOPLE EAT

Test	Dyadic Speech-formal	Lang-Beh Amoebeth
Setting	Dr-Pt	Dr-Pt-Eng
Stress	Ego involved speech	Amoeb alt bryo
Measures	TTR Pen Tense Rate of Speech	(a) Content (b) Form (c) Behav (d) Drug done - Sed threshold (e)

Grundlagen:

Acute changes first - durability second

1) What is therapy designed to change?
2) How can this change be measured? { appropriate index of cg
3) How durable is the chgr.

Neurophys. indices applicable to treatment in which neurophysiol changes are predicted.

ELECTROSHOCK RESEARCH ASSOCIATION

SCIENTIFIC SESSION

Thirteenth Annual Meeting
Sunday, May 12, 1957

Hotel Morrison — Chicago, Illinois

Chairman: Ernest B. Parsons, M.D., Pres.

Cotillion Room

9:00 A.M. Registration

Neurophysiology

1. 9:30 A.M. Studies of EEG change with EST with or without Atropine in Man and Rat. Tetsuo Fukuda, M.D., John A. Stern, Ph.D., George A. Ulett, Ph.D., M.D.

9:45 A.M. Discussion opened by: Bernard L. Pacella, M.D.

Psychological Aspects

2. 10:00 A.M. Personality Factors affecting Clinical Responses to Electroshock Therapy. Robert L. Kahn, Ph.D., Max Fink, M.D.

3. 10:15 A.M. An Evaluation of the Peculiar Selective Quality of Post Electrotherapy Amnesia. Aloysius S. Church, M.D.

4. 10:30 A.M. Psychopathology of Electroshock Therapy. Bernard L. Pacella, M.D.

10:45 A.M. Discussion of 2, 3, & 4 opened by: Leo Alexander, M.D.

Techniques

5. 11:15 A.M. Current Patterns in Cerebral Electro-Therapy. Gerhard R. Hirschfeld, M.D.

6. 11:30 A.M. Further Studies on the Analeptic Action of Peripheral Electrical Stimulation in Hypoglycemic Coma. Charles H. Jones, M.D.

11:45 A.M. Discussion of 5 and 6 opened by: William L. Holt, M.D.

Embassy Room

12:30 to 2:30 P.M. Annual Luncheon and Business Meeting.

Chmd

Memory: selectivity of forgetting as an adaptive phenomenon

under 45 depression - remote — Future past EST 3 hrs → 24 hrs.
Question of omitted data

Post-Rx selective amnesia / " " recall } as to adaptive value

case I: Post EST - forgetting ~~=~~ despite Rx resting posture

" II " " - " = H

" daughter's marriage
" son's entering priesthood

other - forgetting who they were.

Dr C. implications relation to depression & significance to psychopathology.

Robot Law: Early & more stable memories

Paulla: "cerebral & neuronal exhaustion" = ECS slowing

id: sex drive, Cgs. ... Return to normal sexual drive
↘ increases. relative hypersexuality.
→? release phenomena → no love object

aggressive - disappear - replaced by positive libidinal drive

Cg in quality of instinctual drive.

etc memory deficit = neuronal exhaustion!!

Dr. Alexander: "Depressed as ECS reactivation"
amot

Emerson: EST causes loss of memory
memory recall is for "gone"

Dr Jones: Hypoglycemia (25-35 mg%) ~~caused~~ coma reversed by parenteral stimuli to peripheral nerves.
IV hydrocortisone ~~reversed~~ coma but does not have as much awakening effect as painful stimuli.

Cotillion Room

Clinical Aspects

7. 2:30 P.M. Clinical Applications of Nonconvulsive Electro-Cerebral Stimulation. John D. Moriarty, M.D.

8. 2:45 P.M. Indications for Electroconvulsive Treatment in Office Psychiatric Practice. Paul H. Wilcox, M.D.

3:00 P.M. Discussion of 7 and 8 opened by: David J. Impastato, M.D.

9. 3:30 P.M. The Use of Electro-Cerebral Stimulation in Mentally Defective Patients. Harold H. Berman,M.D., Milton Jacobs, M.D., and Joseph Spielman, M.D.

3:45 P.M. Discussion opened by: Charles Buckman, M.D.

Drugs and ECT

10. 4:00 P.M. A Comparative Evaluation of the Safety of the Use of Chlorpromazine and Reserpine in Conjunction with Electro-shock Therapy: A Review of the Literature and a Clinical Report. David J. Impastato, M.D., Seymour Berg, M.D., Anthony R. Gabriel, M.D.

11 4:15 P.M. Electroconvulsive Therapy Combined with Chlorpromazine and Reserpine. Frank J. Ayd, Jr., M.D.

4:30 P.M. Discussion of 10 and 11 opened by: Herman C. B. Denber,M.D.

Brumblatt

(1) Methodology - Population & design

(2) Indices - selection fx of question

Rating scales

Psychical indices

Social "

Physiologic "

related & personality

- perplexed about controls -

Zubin: "Improvement" vs alteration -

Baseline: what do we can we learn about the mental pt

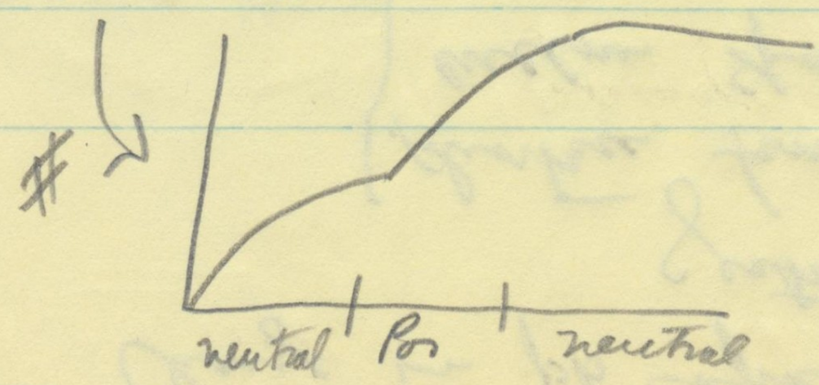
(1) Personality - What is relation between @ personality & psychopathology (b) ?

Zubin posits each is tenable @ = (b)
(b) interference in @
@ indepnd. of (b)

but discusses third ↗

a) Premorbid
b) Morbid → Physical, sensory, conceptual, perceptual
c)

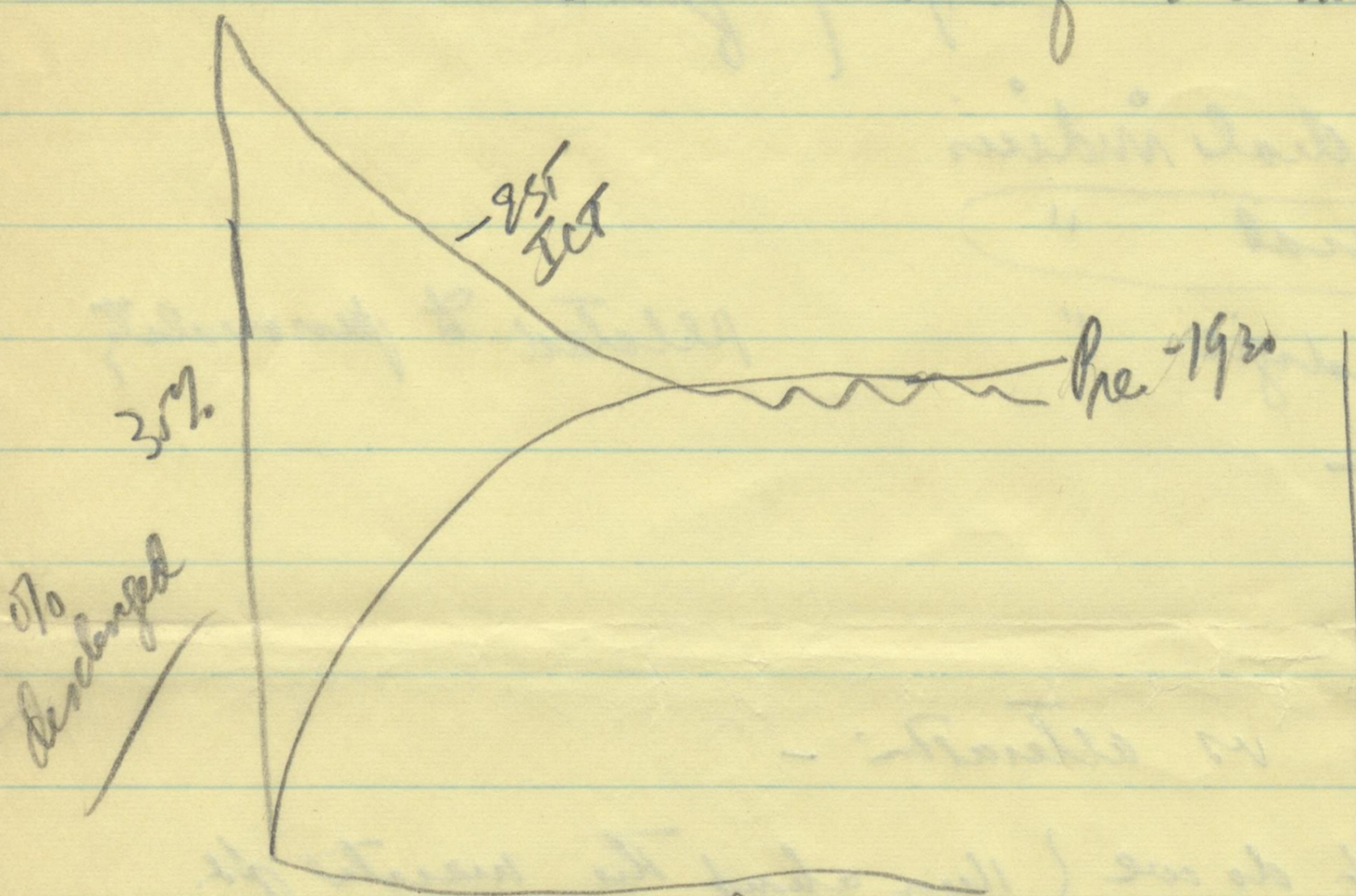
affective utterance



Capacity to emit affective utterances

Zubin: Building a rating scale for Psychodrama

What criteria do we have for outcome changes?



Outcome measurement

1) Change in Behavior
2) Attitude of therapist
3) Goal of therapist
4) Expectation of therapist

also of milieu
of family
of employer

Clinical Trials - Pt's report of Status
Pt's Report
Degree of control over symptoms
Pre Post Follow up

How & when to measure the global response

Pivotal Change in Pt's report of Status - Symptoms

(1) Clinical also Status Interview - States specific
Pt has certainty in Rate (Rate) Behavior.
Concentrated Efforts ≠ Improvement

BARRABY Scale - Soual

~~Neonate~~ Neonate - Age ± 2-3 mo
~~normal~~ to 1 year

Tempero-spatial gestalt

Communication Level (Transactional)
1) Experiential
2) Referential

Fallacy of "improvement" when communication level shifts from referential to experiential or limitation of time / space } in which interaction occurs

Psychotherapy - Drugs, EST - { ~~goal~~ Ref → Exp, ~~Ref~~ Exp → Ref } Broaden Temp-Spare

Language as behavior

To make Clinical evaluation more objective

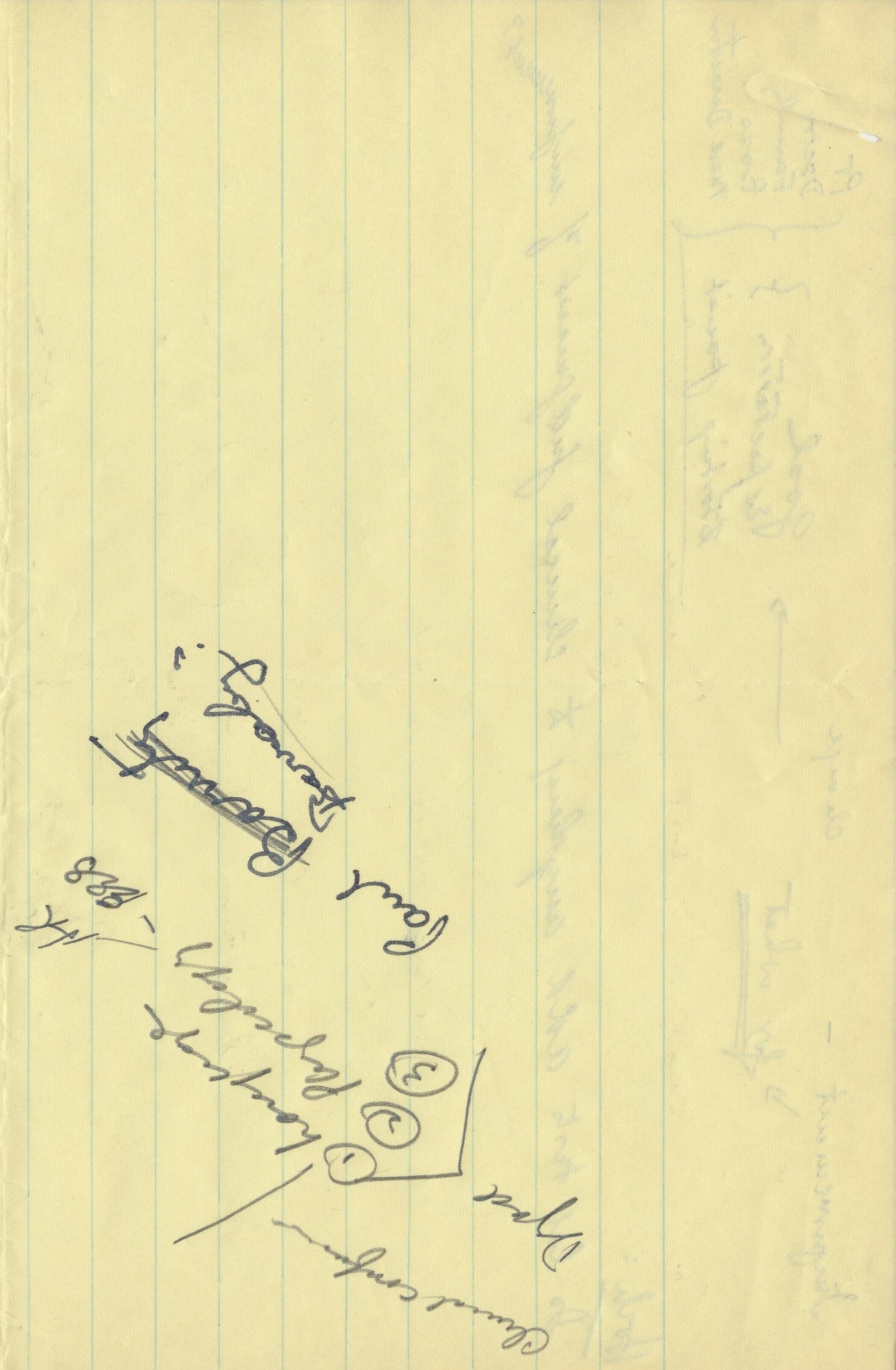
Harry:

Mechanism = simple conclusion or related

BST ? (Surf) ↓ Erg change

Schultz: { Premorbid Personality + Δ indep - Prognosis good or bad ?

Later



Improvement – change.

↳ for what ⟵ ⟶ goal / Expectation / Starting point } { PT, Doctor, Family, Boss, Med Director

Hoch:

Do lab tests add anything to clinical judgment of improvement?

Conf

6/3

Dyadic analysis -

Intervene's effect in dyad

Person's response depends on role behavior.

No probable area - interpersonal defined only.

Dyads: Pairs of relative equilibrium
or disequilibrium

Role of problem solving between - similarity to
the effect of interdependence of subjects to the interviews

Analysis of Encounters

~~Part - Whole - Complaint - Post - Most variable~~

Common - Low speed - High TTR (more variability) - more Dr - post
Not Comm - fast " - low TTR - less " - present

Use of TTR & speed curve to show up breaks in defense &
restitution -

Homologous Parts

Significance of difference between extinctions at threshold – right cheek – left cheek stimulation and extinctions when (1) left cheek is stimulated 10% above threshold +, (2) the right hand is stimulated 10% above threshold.

		Pre	4-6	7-9	10-12	Post
E.S + Control	Thresh vs LC/RC	P=.001 N=18	P=.011 N=16	P=.001 N=18	P=.072 N=17	P=.032 N=19
	Thresh RC/LC	P=.048 N=18	P=.119 N=18	P=.026 N=22	P=.605 N=14	P=.180 N=19
E.S	Thresh LC/RC	P=.002 N=13	P=.019 N=12	P=.003 N=12	P=.033 N=11	P=.151 N=15
	Thresh RC/LC	P=.113 N=11	P=.291 N=13	P=.151 N=15	P=.500 N=9	P=.212 N=14
Controls	Thresh LC/RC	P=.500 N=5	— N=4	P=.109 N=6	P=.656 N=6	— N=4
	Thresh RC/LC	P=.227 N=7	P=.031 N=5	P=.062 N=7	P=.500 N=5	P=.500 N=5

– indicates significant

Heterologous Parts

Significance of Difference between extinctions at threshold – right hand – left cheek stimulation and extinctions when (1) the left cheek stimulus is 10% above threshold, + (2) the right hand is 10% above threshold.

		Pre	4-6	7-9	10-12	Post
E.S + CONTROL	THRESH L/RH	P=.500 N=21	P=.166 N=17	P=.143 N=22	P=.001 N=21	P=.001 N=20
	THRESH RH/L	P=<.001 N=25	P=.010 N=19	P=.008 N=22	P=.048 N=22	P=.008 N=18
E.S	THRESH L/RH	P=.500 N=13	P=.291 N=13	P=.227 N=16	P=.029 N=14	P=.029 N=14
	THRESH RH/L	P=.004 N=18	P=.029 N=14	P=.002 N=16	P=.133 N=15	P=.151 N=13
CONTROLS	THRESH L/RH	P=.363 N=8	N=4	P=.109 N=6	P=.016 N=7	P=.008 N=6
	THRESH RH/L	P=.008 N=7	P=.188 N=5	P=.304 N=6	P=.031 N=7	P=.008 N=5

— indicates significant

Subcenw vs Con

↓

mm EES

↓

Sup n Schuz -
" M "

↑

SCT

Byz SES

↓

Sup n Depr
O-m.

↑

ng c SCT.

pel Sarlu
Silvenate
Pietramala

Denial in Electroshock therapy. Laboratory of Legauet.

Psych. 17
May 54 p 153

In dealing i human subjects ... the meaning & the urgency & the pt. & the nature of his personality & it are not merely relevant but may be the most important factors in explaining the resulting behavior.

Psychol post EST

(1) Literature

(2) Significance of denial in Pt post EST
" " " "
in evaluation -
If evaluation is done in non-psychotherapeutic or superficial manner, results is approximate as it does not test defenses

3) Notes on pts statements about prev EST
" " " " "
what happens in EST
" " " "
about { significant events } not
{ insignif " }

3.

7B

~~Coefficients of Correlation~~

Table ~~III~~ II

Intercorrelations of individual indices and ~~total~~ ~~rank order of~~ degree of delta activity.*

	AVERAGE DELTA	HIGHEST DELTA IN ONE LEAD	LOWEST FREQUENCY	HIGHEST AMPLITUDE	LONGEST DURATION BURSTS	Degree ~~TOTAL RANK ORDER OF ABNORMALITY~~ OF DELTA ACTIVITY
AVERAGE DELTA	—	+.98	-.79	+.72	+.67	+.80
HIGHEST DELTA IN ONE LEAD	+.98	—	-.67	+.72	+.68	+.84
LOWEST FREQUENCY	-.79	-.67	—	-.78	-.47	-.90
HIGHEST AMPLITUDE	+.72	+.72	-.78	—	+.57	+.88
LONGEST DURATION BURSTS	+.67	+.68	-.47	+.57	—	+.63
~~TOTAL RANK ORDER OF ABNORMALITY~~ Degree of DELTA ACTIVITY	+.80	+.84	-.90	+.88	+.63	—

FN 1

* All correlations significant at better than 1% level of confidence.

Dorcas 6/26

JSM

6/19/56

1) Admission of Pts

2) Seeing Pts @ HH (2A) - Electrolysis, Ambulatory?

3) Income

Expenses: Malf Insurance

Membership

4) Affiliation - LGH?

NSH?

EES income NSH?

5) Maternity Affiliation? Time for teaching?

6) Announcement of appt - stamps

7) Appt. stamps Switchboard?

THE A.P.A. NEWSLETTER

PUBLISHED BY INFORMATION SERVICE

OFFICE OF THE MEDICAL DIRECTOR

VOL. 9, NO. 10 – JUNE-AUGUST 1957
(SUMMER EDITION)

Available to non-members at $5.00 per year.

Dr. Alan Gregg Dies

APA Honorary Fellow Dr. Alan Gregg died at his home in Big Sur, California on June 19 at the age of 67. He served as Vice-President, Division of Medical Sciences, Rockefeller Foundation for two decades and in this position of national leadership made psychiatry one of his major interests. Few men have had so profound an effect on the advancement of medical sciences as he. He will be sorely missed by physicians the world over and by psychiatrists most particularly.

NINTH MENTAL HOSPITAL INSTITUTE

For the ninth year over 400 staff people from all types of mental hospital installations in Canada and the U. S. will come together at the Hotel Cleveland, Cleveland, Ohio, Sept. 30 – Oct. 3 to consider common problems and directions of progress. Major topics at this year's Institute will deal with the problems of the open hospital, revision of commitment laws, management principles, role of private hospitals, mental deficiency as a psychiatric problem and many others. Prof. James L. Hayes, Department of Business Administration, St. Bonaventure University, will deliver the Academic Lecture. The enrollment fee is $50. See program and registration form in Mail Pouch.

All who plan to present papers at the 1958 Annual Meeting in San Francisco please note Form for submitting proposals to the Program Committee in the Mail Pouch this month.

NOTICES

1. THE ANNUAL APA DESK APPOINTMENT BOOK FOR 1958 WILL BE OFF THE PRESS THIS SUMMER. USE ORDER BLANK IN THE MAIL POUCH. DEMAND EXCEEDED SUPPLY LAST YEAR. SUGGEST ORDERING PROMPTLY. ($3.00 PER COPY).

2. WE HAVE A FEW HUNDRED COPIES LEFT OF THE BOOK OF SUMMARIES OF SCIENTIFIC PAPERS OF 1957 ANNUAL MEETING, BUT THEY ARE GOING FAST. ($1.00 PER COPY).

GRADUATE TRAINING IN PSYCHIATRIC HOSPITAL ADMINISTRATION

Two outstanding courses in psychiatric hospital administration are now available and merit the attention of all psychiatrists concerned with advancing professional standards in this area. One is at Columbia University and the other at the Menninger School in Topeka.

The Columbia University Course

This course, which leads to a Master of Science Degree, is under the auspices of the School of Public Health and Administrative Medicine and the Department of Psychiatry of the Faculty of Medicine. It encompasses basic courses in administration, specialty courses in the Department of Psychiatry, and supervised field work.

Recognizing that mental hospitals are hard put to let a staff doctor leave for prolonged periods, Columbia has made every effort to tailor the course to meet candidates' needs. It extends over 20 months, but only eight of these are in academic residence broken into four quarters of 2 months each. The preferred plan is for the candidate to spend four months in academic residence, followed by 12 months in a supervised administrative residency or in a position already occupied by the candidate during which time he may carry out a special project. This is followed by a final four months in residence. For candidates who already occupy key administrative posts and who cannot be away for more than one quarter at a time, special arrangements can be made.

As for costs, each candidate's need is likewise evaluated individually. The total tuition for the 8 months of academic residence is $900.00 and Public Health Service stipends are available which will pay this plus ordinary living costs. Frequently, state funds in the state where the candidate works, are available to pay travel costs.

There are some openings for the year starting in Sept. Write for details to: Exec. Officer, School of Public Health, Columbia University, 600 W. 168 St., N.Y. 32, N.Y.

THE AMERICAN PSYCHIATRIC ASSOCIATION

Office of Medical Director, 1785 Mass. Ave., N.W., Washington 6, D.C. ● Canada Office, 216 W. St. Clair Ave., Toronto 5, Ontario

Office of Executive Assistant, 1270 Avenue of the Americas, New York 20, N. Y.

PLEASE ADDRESS ALL NEWSLETTER COMMUNICATIONS TO OFFICE OF MEDICAL DIRECTOR

The Menninger School of Psychiatric Hospital Administration

This School offers a one-year integrated course, leading to a Certificate, which draws on the resources of the Menninger Foundation, Winter V.A. Hosp., and Topeka State Hosp., supplemented by other Kansas state hosps. and schools, an industrial concern, a general hospital, two universities, and several state government agencies.

The curriculum consists of didactic instruction in basic administration while clinical experience is provided by systematic rotation in the departments of participating institutions accompanied by seminars with department heads and special projects.

With regard to costs, applicants may apply with state sponsorship. The sponsoring state may pay the stipend with the understanding that the applicant will remain in the employ of the state after he completes training. A limited number of stipends at $625 a month are available to unsponsored applicants.

The next course starts in September. For full information write to the School, Menninger Foundation, Topeka, Kansas.

APA Position

Our Association has always insisted that Supts. and Med. Dirs. of institutions for the mentally ill should be psychiatrists. In doing so, however, it recognizes the need for special training in administration for those who wish to qualify for these positions.

The courses described above have been established with the encouragement and support of the Committee on Certification of Mental Hospital Administrators. Only a handful of psychiatrists have completed them thus far. The courses are expensive for the sponsoring agencies to offer and experienced persons have put great effort into curriculum development.

Commissioners, superintendents, and others in administrative positions, as well as those who aspire to these positions, would do well to give serious thought to signing up for these courses. Available financial support should be an encouraging factor.

NIMH GETS $4 MILLION INCREASE: The US Congress has voted $39,217,000 for the Nat. Inst. of M. H. under Robert Felix' direction. This is $4 million more than last year—remarkable in view of general economy drive. Testimony of Dr. Braceland for the APA and Mike Gorman of National Committee Against Mental Illness played important part in explaining need for additional monies in these areas to the Senate and House Committees. Senator Lister Hill and Representative John Fogarty, always strong supporters of mental health, spearheaded the effort to get the appropriations through Congress.

EXECUTIVE COMMITTEE ACTIONS

The Exec. Com. met at the APA Central Offices June 29. (Unusual and pleasant feature was that most of the APA staff members attended to become better acquainted with the Com. members and general affairs of the Association.) Among other things, the Com.: With regard to financing remodeling of new home, delayed taking out any mortgage unless and until expenditures appear to make it necessary. (work on the new home is expected to start this month. Hope is to have it finished by January 1). . . Approved setting up separate fund for receiving miscellaneous gifts (such as royalties from publication of lecture series of North Shore Hospital) with proceeds to be used to add to APA library. . . . Authorized and appointed Committee to work with planning group for the Jamestown Festival this fall which will celebrate Williamsburg State Hospital, the oldest in U.S. Drs. Zigmond Lebensohn, David Wilson, David Young, and R. Finley Gayle, Jr. are on the Com. with Robert L. Robinson of this office as advisor. . . . Approved contribution of $50 to the National Society for Medical Research. . . . Continued APA membership in the World Congress of Psychiatry. . . . Designated Francis J. Braceland as official delegate to the General Assembly of the International Society for the Organization of World Congresses of Psychiatry. . . . Approved in principle proposed constitutional amendment prepared by the District Branch Assembly regarding election to membership in APA through the Branches; and also another proposed amendment incorporating present practices regarding creation and operation of District Branches. . . . Approved recommendation of Medical Director to consolidate all central office services for mental hospitals and to explore ways to finance increased services in this area. . . . Suggested appointments of APA representatives as follows: Dr. Frank J. Curran to World Federation of Mental Health meeting in Copenhagen; Herman C. B. Denber to Congres de Medecins Alienistes et Neurologistes de France et des Pays de Langue Francaise at Lyon, France; Rudolph C. Novick to Advisory Com. of National Congress of Parents and Teachers. (These appointments were made by President Solomon). . . . Recommended to Council reappointment of Dr. Henry Brosin to the American Board of Psychiatry and Neurology. . . . Directed that problem of improving dental care in mental hospitals be explored at next Mental Hospital Institute. . . . Received announcement of retirement of Dr. Frederick L. McDaniel as CIB inspector and expressed appreciation for his services over five years. . . . Changed dates for fall Council meeting to November 23-24 (Sat.-Sun.) in Boston, Massachusetts. . . . Selected Saturday, October 26, as date for next meeting of the Executive Committee.

● A pilot training and research program stressing the interrelations of biological and physical sciences as key to better understanding of the nervous system and human behavior has been set up at Albert Einstein Coll. of Medicine, Yeshiva Univ., (Eastchester Rd. and Morris Park Ave., N.Y.C. 61) with a $1,700,000 grant from the Nat. Inst. of M.H. There is provision for 36 pre- and post-doctoral fellowships. The grant covers a six-year period. Write to Labe Scheinberg, M.D., Dept of Medicine, for further details.

FALL COMMITTEE MEETINGS: Woodner Hotel, Washington, D. C. The following Committees will meet all day on Friday and Saturday, Oct. 25-26: Standing Coms. on Technical and Community Aspects and Professional Standards. Also Standing Coms. on Budget, Ethics, Program and Nominations. Ad Hoc Coms. will meet only on request of the Chairmen and with clearance of the Coordinating Com. Chairman to whom they are assigned.

The Council this year will not meet to receive Committee reports until November 23-24, but the Executive Com. will meet with the other Coms. on Sat., Oct. 26.

Canadian Mental Hospital Institute

Plans for the first Canadian Institute are shaping up nicely. It will be held at the King Edward-Sheraton Hotel in Toronto, Jan. 20-24, under joint auspices of APA and the Canadian Psychiatric Assn. This Institute will be patterned after the U.S. meetings. Major theme will be "The Mental Hospital and the Changing Community." Dr. Mary Jackson is Chm. of the Program Com. with Drs. C. Buck, W. Boothroyd, J. Griffin, J. Hagan, A. Miller, D. Lewis, and Drs. C. Roberts and J. Gilbert of the M.H. Section, Dept. Nat. Health and Welfare as advisors. Since it will have a clinical orientation, this first Canadian Institute is planned for psychiatrists in senior posts in all types of Canadian mental hospitals and for the administrators of Federal and Provincial mental hospital systems. More details in the fall.

New Printing of Glossary

With the first printing of 30,000 copies of A Psychiatric Glossary exhausted, a new printing of 22,000 copies is now available. A limited number of copies have been made up with a hard-cover library binding for libraries and others who would like it in more durable format. The hard-cover copies have no cover design—merely the title of the book. They sell for $2 per copy. The paperbound edition remains at $1 per copy. Order from Mental Health Materials Center, 1790 Broadway, N.Y. 19, N.Y.

● Did you know that the following Isaac Ray Award Lectures had been published and are available through any bookstore? The Psychiatrist and the Law, by W. Overholser, 1953; Psychology of the Criminal Act and Punishment, G. Zilboorg, 1954; The Guilty Mind: Psychiatry and the Law of Homicide, by Judge John Biggs Jr., 1955 (all these by Harcourt Brace & Co.); and The Urge to Punish, H. Weihofen, 1956 by Farrar-Straus and Cudahy. The latter publisher will also publish the lectures by Dr. Philip Q. Roche given at the Univ. of Michigan this year.

● The General Practitioner Education Project now operating from the Central Office (Charles E. Goshen, Project Director) would appreciate information about psychiatric courses for GPs now in planning stage. It is suggested that when a course is being planned effort should be made to have it approved for credit by the Amer. Acad. of General Practice (through its local or state branches) as inducement to attendance. Dr. Goshen will be glad to assist in publicizing such courses.

● The Smith, Kline and French Foundation Fellowship Committee awarded 19 new Fellowships in May. 13 of them will enable medical students to participate in research and training programs this summer. Among other Fellowships announced, one doctor will study research organization at Boston Psychopathic Hosp., another will take a Master's degree in public health, and two lectureship programs will be established. Applications for consideration in October this year should be submitted by September 16. Information and application forms may be obtained from the Fellowship Committee, Box 7929, Philadelphia, Pa.

ASSEMBLY OF D.B. NOTES . . . Met May 13-14 during Annual Meeting. . . . Installed following officers for 1957-58: David C. Wilson, Speaker; Walter H. Obenauf, Deputy Speaker; John R. Saunders, Recorder; Policy Com., (Area I) Albert M. Biele, Frank P. Pignataro (Alt.); (II) Lester E. Shapiro, Ulysses Schutzer (Alt.); (III) J.G.N. Cushing, Edward H. Williams (Alt.); (IV) James L. Sagebiel, G. Wilse Robinson (Alt.); (V) Alfred Auerback, Edward G. Billings (Alt.). . . . Volunteered to assist Med. Dir. in obtaining accurate information to publish obituary notices in Newsletter. . . . Revised Procedural Code. . . . Suggested Council action to seek extension of MEDICARE program. . . . Commended Dr. Wilson for Assembly exhibit at Annual Mtg. . . . Decided to study inspection of psychiatric facilities and depts. of psychiatry in gen. hosps., and facilities of public mental hosps. . . . Submitted two proposed Constitutional amendments for consideration by Council. . . . Will investigate planning of Divisional Meetings. . . . Scheduled next mtg. for May 12-13, 1958 at St. Francis Hotel, San Francisco.

PERSONALS. . . S. Spafford Ackerly was honored by a Testimonial Dinner on June 19 in recognition of his 25-year contribution to psychiatric education and community health in Louisville and Kentucky. . . . Paul V. Lemkau has returned to Johns Hopkins Univ. as Prof. of Public Health Admin. (mental health) at School of Hygiene & Public Health following a 2-year leave of absence. . . . Baruch Silverman was presented a Canadian Mental Health Award on Apr. 17 in recognition of "his outstanding contribution to the mental health of the Canadian people." . . . Alan D. Miller, Dir. of MH Study Center of Nat'l Institute of Mental Health, was transferred to England on June 18 for advanced study and research. Stanley F. Yolles has succeeded Dr.Miller as Dir. of the Center. . . . Major admin. appointments in N.Y. State on July 1 were: Arthur G. Rodgers (LF) as Dir. of Syracuse State School; Ulysses Schutzer as Dir. of Binghamton S. Hosp.; Charles Greenberg as Senior Dir. of Rome State School; and William C. Johnston as Dir. of Craig Colony. . . . Franz J. Kallmann received an honorary medical degree as one of 6 scientists in different fields so honored at Third Int'l Congress of Medical Arts, Turin, Italy during program, June 1-9. . . . W. Horsley Gantt and Harold Rosen were Visiting Professors for 2 weeks this spring at Univ. of Arkansas Dept. of Psychiatry. . . . Don D. Jackson appointed Asst. Clin. Prof. of Psychiatry at Stanford Univ. Med. School and elected Pres. of Mid-Peninsula Psychiatric Soc. . . . William H. Kelly has accepted position of Asst. Dir. of Dept. of Mental Health and Head of Mental Hygiene Div. for State of Michigan.

NEW PRESIDENTS & SECRETARIES . . . Ark. D. B.: Robert G. Carnahan & Leroy D. Lamm. . . . Cent. Calif. D.B.: William S. Fife & Arnold Sheuerman, Jr. . . . No. Calif. P. Soc.: Thomas A. Gonda & Maleta Jo Boatman. . . . Kings County (N.Y.) D.B.: Morton H. Hand & Abbott Lippman. . . . Hawaii P. Soc.: Robert A. Kimmich & Robert S. Spencer. . . . Md. D.B.: Leo Kanner & Charles Ward. . . . No. Pacific D.B.: Herman A. Dickel & D.E. Alcorn. . . . Quebec D.B.: Graham Taylor & Henry Kravitz. . . . NP Soc. of Va.: Thomas F. Coates, Jr. & W.D. Buxton. . . . Washington P. Soc.: Seymour J. Rosenberg & Marvin L. Adland. . . . Del. P. Soc.: George

DeCherney & Walter Davis. . . . East Bay P. Assn.: Louis B. Boyer & Marion E. Roudebush. . . . Long Island P. Soc.: Edgar D. Congdon & Harry H. Gonda. . . Milwaukee NP Soc.: David Cleveland & Edward C. Schmidt. . . . No. Pacific Soc. of N&P: D.E. Alcorn & Robert M. Rankin.

BRIEFS. . . . All who attend the World Congress in Sept. will be glad to hear that Nat'l Committee Against Mental Illness, Inc. has (through APA) made funds available for simultaneous translation of papers. . . . Herman B. Snow, Supt. of St. Lawrence State Hosp. in NYS, writes that 90% of his patients are in open wards except at night. . . . Iago Galdston, Chm. of Com. on Int. Rels., has sent over 100 copies of the Summaries of Annual Meeting Papers to colleagues abroad. . . . I have prepared a little pamphlet about my favorite vacation haunt called "Day Sailing and Cruising in Mahone Bay, N.S." and I'll send you a copy if you write. . . . Chas. Bush and David Gaede are inspecting hosps. in Mich., having just finished up in Mo. Hope to start in NYS in a few weeks. . . . Warren Johnson, my asst., recently conferred with Cyril Ruilmann, F. Williams, and O. S. Hauk in Nashville on psychology legislation in Tenn. . . . Smith, Kline & French Labs. have just granted $10,000 to the Nat. Acad. of Relig. and Psychiatry for fellowships for clergymen who want to become mental hospital chaplains (there are over 300,000 clergymen in the country). . . . Sorry to hear of the death in June of Miss Dorothy Clark who rendered such valuable service as APA Nursing Consultant from 1949-1951. . . . Write to Dr. Leo Alexander for details about the fifth Annual Institute of Psychiatric Treatment to be held in Philadelphia Oct. 17-19. . . . A lady reporter at the Ann.Mtg. in Chicago was overheard to say, "Next to the White House crowd this is the nicest group I've met." . . . . Chas. Goshen and I attended meeting of APA Liaison Com. with Amer. Acad. of General Practice in NYC to discuss Gen. Practitioner Educ. Project. (R.Matthews, Chm., Frank Luton, Phineas Sparer, and Merritt Foster were there for APA)....On June 6 spoke at Ann. Mtg. of the M.H. Soc. in N.J. and on the 10th at the opening session of the M.H. Institute at Lansing, Mich. where V. A. Stehman had brought in representatives of all Mich. hospitals. It was an outstanding meeting well attended. . . . Went from Lansing to Battle Creek with E.F. Jones, Mgr. of VA Hosp. there, and showed his staff pictures of foreign hospitals. . . . Did same thing for residents at Ray Waggoner's Institute in Ann Arbor a few days later where also talked with Moses Frohlich who (as Chm. of Com. on Nomenclature) is hard at work on system for recording case data on IBM cards. . . .With Robert L. Robinson met in Toronto with Program Com. for Canadian Mental Hosp. Institute to finalize details on June 21 and was also able to visit Homewood Sanitarium at Guelph (A.L. MacKinnon, Dir.) where the Ontario Psychiatric Soc. was meeting on the 22nd. . . . Also recently spent several days in Conn. with Chas. Bush where we consulted with the Governor on the mental health program there. Sorry to report that John Blasko has resigned the Conn. Commissionership for another job; but his efforts to have the law changed to give the Commissioner more administrative authority have been successful. . . . On June 19 visited the rapidly expanding Dept. of P. at the Univ. of Miss. under Floyd Moore and Oscar Hubbard. Also visited State Hosp. at Whitfield where Wm. L. Jaquith and John Head have built up a fine program since 1949. They have a high patient turnover now and a new building for maximum security patients especially worth seeing. Also renewed acquaintance with Beverly Smith and Willard Waldron in Jackson. . . . On June 21 went to NY to speak to Bd. of Directors of N.A.M.H. APA members present were Hon. Fellow Mrs. Henry Ittleson, Walter Baer, G.S. Stevenson, Jules Coleman, Marion Kenworthy and Paul Lemkau. Was pleased by much support from the floor for closer ties and strong support for APA's programs. . . . On June 28 joined Ewen Cameron's Com. in Boston on future planning for the CIB in Pres. Solomon's office. Drs. Bartemeier, Ewalt, Braceland, and Yerbury also there. . . . Flew back to Washington to meet with Joseph Barrett on planning for celebration of opening of Williamsburg State Hosp. (1773) in conjunction with Jamestown Festival this October. . . . After the Exec. Com. mtg. Pres. Solomon and I flew to Nashville to participate in dedication of magnificent new admission and treatment building at Central State Hospital named after the Supt. O. S. Hauk. Wm. S. McCullagh, Pres. of the So. Psychiatric Assn. and Frank Luton also were among the speakers. Asst. Supt. White presided and Cyril Ruilmann introduced the speakers. Gov. Clement gave the main address. The Tenn. program has improved remarkably in the past two years. . . . Forgot to mention last month that in course of Mental Health Week speaking tour I participated in inspiring award ceremony for employees at St. Louis State Hosp. where over 700 have served for 10-25 years. Congratulated Supt. Kohler, his Dirs. of Nurses and Volunteers who organized the program. . . . Mike Gorman and I had stimulating talk with Robert Felix and Seymour Vestermark recently concerning NIMH programs in coming year which will be expanded with increased appropriations. . . . Also attended meeting of Wyoming Valley M.H. Soc. in Scranton, Pa. where I met APA members Robert C. Murphy and Emlyn T. Davies. . . . Received notice this month that NIMH Advisory Council had turned down our application for renewing M. H. Architecture Study grant; but funds are available to continue it to end of year and in meantime effort will be made to find other ways of keeping it going. . . . Expect to be off to Mahone Bay, Nova Scotia by end of month for a few weeks of sailing and loitering. . . . Happy vacationing to you all. . . . The next Newsletter will be in Sept....

Daniel Blain

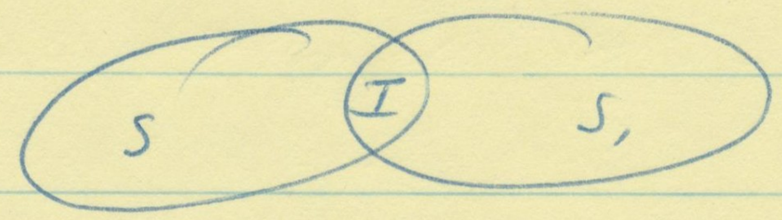
Medical Director

P.S. Don't forget to order your copies of the 1958 Desk Appointment Book ($3) and the Summaries of the Scientific Papers ($1) before the supply runs out.

Preliminaries

Associative mechanisms related not to perception but to attitudes, habits that facilitate responses.

Mathematical models — Partitioning



In a test situation, it is not the number of samples available —
but the number of samples tested

but bits of information specified as the observer sees it,
but bits of information handled (decoded and)
by the organism.

"Set theory" is helpful in separating the concepts of association —

Teuber 7/30/57

Gap in substance of brain → visual field gap

But in daily activity no gap

1) Sensory loss - primary

2) + subtle chgs in other aspects of vision (somatosens)

3) + differences in discriminately complex tasks -

Goldstein Hg:

visual defect. requires focal symptoms } do not separate Hgs + conclude

But aphasia is non-apt. gives symptoms diff $p = 0.01$ between groups.

Touch Threshold
2 Point
Point Localization } sensory changes are ~~related~~ same in Hgs & somesthetic defects.

When form Hgs are given — defects noted in both hands.

EEG - Reactivity

V-5-56

EST hypothesis

EEG abnormality reflects degree of brain damage. Extent of damage is not the index which reflects improvement, but a considerable degree is generally required to reverse the pathology.

If pathology is at a cellular level - ie ionic relationships - then such damage may be sufficient to permit a re-organization of the cellular components.

Hyp: (a) Psychosis results from abnormal ionic metabolism, possibly reflected in Mg^{++} or K^{+} - Such a change being slow in onset

(b) The behaviour is a resultant of the past experience and the disorganized perceptions, affects resulting from (a)

(On this basis, the analytic-psychiatric approach describes and predicts the behavioral changes, language, defenses, etc which the pt. utilizes in the maneuvering he balances — (Error of ~~balance~~ equating psychosis + neurosis - while needing

may be the same, the ~~psych~~ etiology is probably different.

Notably, the relationship between adol. preg. incid + mental illness ~~etc~~

+ the perpetuation + effects / stimuli or the waste + salt metabolism.)

Concl: EST alters membrane potential and permeab (B-B-B)

a new ionic level is achieved.

ICT also does this.

Cerebral Reactivity

9-12-56

"Cerebral Reactivity"

In going over EEG records of Leah Resnick, noted the discrepancy of 1) High EEG abnorm. after 5 EST and low EEG abnorm after 9 EST

2) "alerted" period in 2ª EEG (after 5) pending H.V. - with no delta accentuation to H.V.

3) High abnormality record during H.V. in 3ª EEG.

Then findings not related to # of Rx. to time of EEG for last Rx-ct

Possibilities: 1) "Alerting" may alter EEG & give irregular pendency

2) with clinical improvement, pt more aware of environment & more easily alerted

But - in lacking of reactivity. if the EEG abnormality in left is this because of high reactivity of brain or of "low" recovery rate. In view of Acid metabolism - Delta in the result of low recovery for trauma = low cholinesterase activity

Also, EEG of younger people show maximum changes early but they persist for a short while while EEG of older people show maximum changes late (7-9)

Age is a factor in the { rate of development of abnormality / recovery rate from trauma – i.e.,

the younger the pt, the faster the recovery – i.e., the less the apparent reactivity

(or) the greater the stim needed to induce an abnormal response.

A. Mechanism - BP — Young – quick return to baseline

B. Insulin - Blood sugar — (delay) – abnormal delta appears after higher doses – for longer periods – persist shorter than normal

c. Delta in EST – in younger people (delay)

More Rx needed – more frequently to induce equal amount of delta change in older people.

Age is not a factor in the degree of dysfunction if the stress is adequate –

Possible that ~~EST~~ cholesterol is highest in younger age

9/17 For alerted periods ~~after~~ after EST – see Freda Green.

October, 1956

EEG: Electroshock

Age vs EEG Changes

EST # 1 & 2 - Reiter - 49 pts.

	4 - 6			7 - 9		
	L	M	H	L	M	H
Below 45 yrs.	5	5	8 (44%)	7	3	10 (50%)
45 yrs. & over	13	5	10 (35%)	6	4	19 (65%)

	4 - 6			7 - 9		
	L	M	H	L	M	H
Below 50 yrs	6	7	12 (48%)	8	4	16 (57%)
50 yrs & over	12	3	6 (28%)	5	3	13 (61%)

Age Distribution - EST 1 & 2 - 49 patients

20 - 30 yrs.	5 / 3
31 - 40 yrs.	1 / 3
41 - 50yrs.	11 / 6
51 - 60 yrs.	5 / 10
61 yrs & over	2 / 3

Reiter vs Medcraft - all ages

	1 - 6	4 - 6		7 - 9		
	L	M	H	L	M	H
Reiter (EST # 2) 25 pts.	11	5	9	7	3	15
Medcraft (EST # 3) 16 pts.	2	5	9	1	6	9

Reiter vs Medcraft - 45 yrs. & over

	4 - 6			7 - 9		
	L	M	H	L	M	H
Reiter (EST # 2) 17 pts.	8	3	6	4	2	11
Medcraft (EST # 3) 9 pts.	2	1	6	1	3	5

CONCLUSION: Both groups (all ages and older group only) % H records with Medcraft same at 4-6 and at 7-9, whereas with Reiter it increases. Therefore Medcraft produces maximal change early in treatment and later changes consist only in changes from left to right. -

Personality - EST
" - EEG

11/21/56

2 separate reports:

Personality related & laboratory change ~~reps~~ in EST

(1)

a) defensive by interpretation - reorganization - introjection - (non denial) - M

b) defensive by repression - "denial" of content - denial of mood (euphoria) OM

Emphasis on "denial" is still wrong.

M-C → paranoid

OM BC - euphoric denial

OM OC - bland, apathetic denial

Interpretation is by (1) family interview - general & clinical Competence - Meter - interpretive - ~~psychotic~~ outside Oriented - non-empathetic

vs hysteric - hypochondriacal - introverted - self oriented - ~~no~~ empathetic

(2) Rorschach

Wed-7:30

Important statements:

1) In melieu of alt bra fx, personality determines
type of behavior

2) Adaptive value of behaviors in melieu (Lorge vs
Lorme) determines evaluation of change
+ " duration " "

3) Clues are:

a) High denial → 1) euphoria + acting out
or 2) "normalcy"

b) Low denial → 1) Paranoid
2) Confused - withdrawal
3) Excited - fearful - anxiety
4) Transient relief of anxiety

4) Rorschach - Empathy vs non-empathy

5) " clues in ⊕ pts referred for EST are those
with low M scores.
a) M = psychotic
b) " = poor personality response to EST

If personality is a factor in EEG
it should be possible to select
a fit c̄ deeta & demonstrate it's
(deeta) appearance or disappearance
depending on what ~~we~~ the examiner
does.

Max Resnick

6^{30} wed

testing - female - (42)

Dr Elliott

Gatter

11/21

② Role of Personality determining Rorschach response

We must be careful about assuming that a correlation is a causal relation — It can be presented as — provocative idea —

a) Degree of EB delta in pure # R → correct completes.

1) M pts do not relate ∴ high degree fact ∴ high threshold to delta ∴ if true, accepted clinical delta is M pts, should be apparent early in No-M pts

1) Different CNS "reactivity"
2) "rapidity" to any stress, i.e., ~~stressful~~ Homeostatic mechanisms very active
3) Personality-relates to Rsa for
4) " alters appearance changes to SSS.

b) Any test test or a long. test in which denial + ~~Acc~~ confabulation are rated as positive ~~useful~~ response. Thus, a high "denial" personality develops ~~fate~~, more readily, "positive answers. There is a weak suggestion of the relation of personality to physiology.

c) DSB: Subjective responses of pt are scored - as such, the more discriminatory fixed answers - "empathetic" pt. may correct for os deficit while the less discriminatory - less fixed scored - non empathetic pt may not be able to correct for os deficits & therefore has displacement &

extract to a higher degree.

As if the servo-feedback is power on O-M
+ therefore non-corrective — ∴ more oscillatory (?)

3-7-58 Dept Conf.

Announcements: : Endocr. ECT study.

Dec. # pts on drugs studied recd.

Patients

Perceptual Tasks: Tach. identif of pictures. #'s

(a) Numbers Test.

~~(b)~~ C ECT. Errors increase - post Rx decrease

Controls: decr. ō practice

(b) Geometric Figure Test:

Some difficulty ō test. decrease :. few numbers

Completion: } qualitative errors - "positive"
Confabulation (guessing) } errors:
Perseverative } Part of total errors (Quantitative error)

A good way at getting at the ~~how~~ qualitative effect of
Change in behavior.

(1) Increased total error
(2) withdrawal rec for identify
(3) confabulation - rec for errors

~~Doctor~~ Dr. also based study ō combination of OBS data &-
circle bars that ~~X~~ & ~~□~~

writ Thresholds; crude idea of

the O?

the O O ← confab

Dyst Conference

see Rees: Comm in Psychoth
am J Psych - XI -
774 - Oct 57

Lang. Analyses 2/7/58.

J Joffe

Dyadic Idea is cornerstone - + been since eventual
goal is psychotherapy -

Lin 100, 75, 50, 50 overlapp, 25, 10. best is 25 word
- closest to score
- Reflect many of the small changes

Ranking Initial 500 word sample, 25 word FTR -
Range 18 - 5. for Coff Var.
M is low, O-R. high - @ 2½
Also asked D Gottschaldt

Joe's statement is that the relationships may reflect educational level
Mot's interpretation - expectations of subject - = verbal log
their views / their role
Could this be an operational criterion as to why the
patient is referred for ECT?

(Standard Dev / mean)

C/M x100 = coefficient of variability
vcc = lower
dcc = phase

Am J Psych - XI -
774 - Oct 57

Lang. Analyses 2/7/58. J Joffe

Dyadic Idea is worthwhile - + been some eventual goal of psychotherapy -

Ln 100, 75, 50, 50 overlapp, 25, 10. best is 25 word
- Easiest to score
- Reflect many of the small changes

Ranking Initial 500 word sample, 25 word TTR -
Range 18 - 5. for Coeff Var.
Milan, O-A. Light - @ 2%
Alus Rated & Butterfield

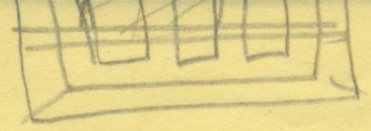
Joe's statement is that the relationships may reflect educational level = verbal Dg
Max's interpretation - expectation of subject -
Their view of their role
Could this be an operational criterion as to why the patient is referred for ECT?

Coeff of variability = $\frac{6}{M} \times 100$ (Stnd Dev / Mean)
sec = slowing
dec = sharpening

Applying Coeff of variation to pts. pre + post ECT.
Gm → more variable, tense mean → higher pens.
PM - dec variability, more rest → lower pens.

both drugs - decrease like PM. - sharpens -
most in pts ō EEG Δ
least " " ō Δ.

Both ↑ opposite to Decrease



Dr. Sutton

1/31/58 Goldenberg. – Department Medicine –

1) Carbohydrates

Glucose Tol Test markedly greater in schizophrenics than non-but not so in DH.

? alcoholic glycosuria – glucose.

Diet signif. in blood chemistry – and may explain signif differences in groups, State Hosp vs. others.

2) Fats. – studied very little.

Uses ketones – Vapor phase chromatog. available.

3) Proteins – distribution – blood studied

Erratic dist. are post-dietary.

4) Enzymes – "magical clues"

mediate synthesis + degradation of all foods.

vitamins – Essential to enzyme

e.g. redox, dehydrogenases.

I: Hypoth of Etiol of MD:

? Modern Concepts of Mental Disease:

1943 – Hofman – LSD – Psychotomimetic

Synthesized 1937 –

LSD: Effect – frightening psychosis → Barnsley

pigmentation

[these effects may be non-specific. Whether role of Brit Chemists in finds]

Why Josh? LSD complex studied

Perhaps Tryptophane provides the source for LSD structure

Tryptamine → serotonin

Excited by possibility that poss compound result from ↑ essential, benign compound

Increment

Narrow minded plant chemistry

II Urinary output (in M.D. 1) "Aromaturia"

↓ Chol E imbalance

a) Measurement of Spots in Chromatog. of Non ↔ Psychot.

b) Aromatic (indole) - metabolites.

Interpolate hydr. released & dist.

Blood Chol E: Hyp. M=F 20↑ ↓

Lee M 7 F=180 = ↓35

Halmberg + Lovell - Sweden
Ceruplasmin
1909

1/10/58 Dr. Green

Rel. Int thres. + EES abn. : no correlation

{ Threshold rises during EST
{ Duration of seizures decreases ∴ EST

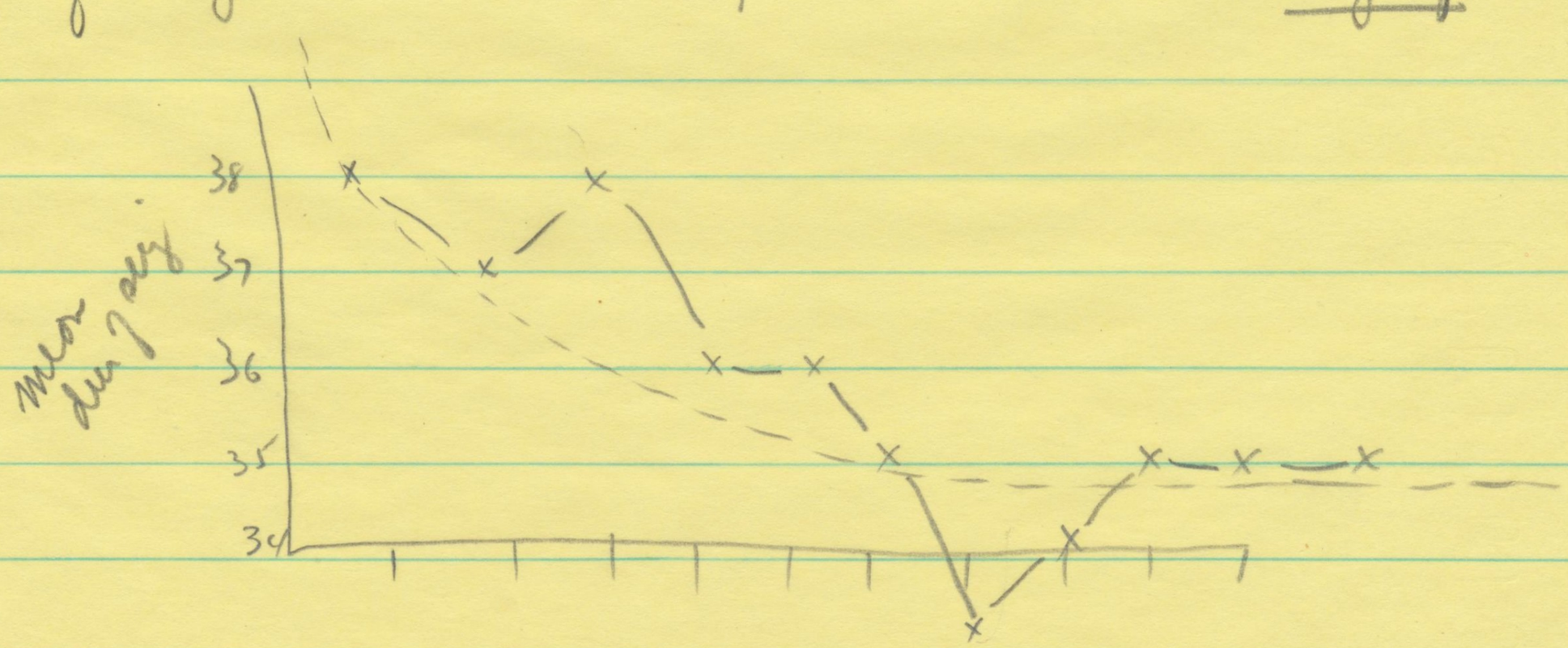
Thres vs Age.

Younger people have lower EST thresholds than older people.

[In the older pts, perhaps the correlation may be ∴ yrs rd + other Neurologic factor.]

Duration of 10 sec's not related to age

Duration of seizure related to # of Rx. — Signif!

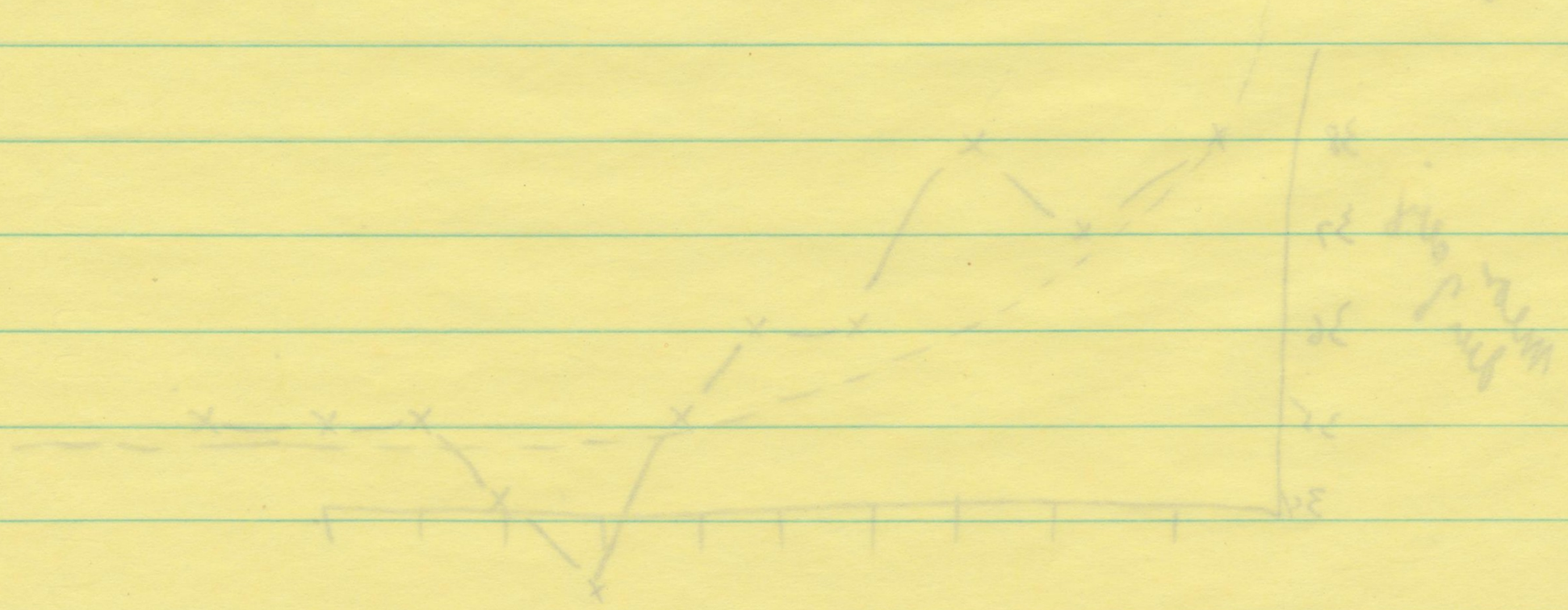


Relation of duration of seizures (10 EST) and Threshold (1st Rx)
(Σ 10 EST)

	T_{Low}	T_{High}
D short	2	6
D med	3	6
D long	7	1

$\chi^2 = 0.02$.

∴ both lower initial seizure threshold,
The duration of seizures is longer,
and the EEG abn. is higher



Staff Conference

1/31/58 Martini

Seizure duration. for 10 Rx 236-38x seconds.

H H or Hm

D_B (12) 0

D_H (13 9

EEG

	No H	H	H H	H H H	G
			383	371.5	
Dur. 3 to seiz	335	337	378		.02
mean	336				
5 seiz					
Motor Seizure 5 seiz.	173	167	301		.02
Inseizure total	35.7 sec		41.1 sec.		

page 1 seizure 291 396

Rank order correlation between duration of initial seizure & total of 10 trials is 0.49.

[c Supramarginal Stim. Initial seiz longer than 3, than 3. Seiz 4 & after 4]

Age + Duration of Seizure : ~~Effect~~ relation of age + seizure duration to obscure.

Effect of Pentothal & suprathreshold

↘ shorten seizure considerably.

Supra { Pent 20s → 30+ secs
0 Pent 316 - 361 secs

Thr 0 Pent 291 - 396 "

Medcraft. Threshold

	4-6	7-9	10-12	N=39
L	25	9	5	
M	7	13	9	
H	7	15	23	

Supra:

				(Est #3)
L	2	1	-	N=16
M	5	6	-	
H	9	9	-	

In 4-6 secs - signif diff ~~between~~ d/t degree of reduced cg

∴ Threshold current → ↓ less EEG cg than Suprathreshold

Refer instrument & Threshold Medcraft.

∴ current is a factor in ~~duration of seizure~~ degree of EEG abnormality

Green 1/3/58

∴ To reduce EES chg (↑ clin eq) early, modification of segment length ~~owned~~ may be of benefit in Clinical response.

Halmburg (Effect of O_2) –

More O_2 → ↓ length of segment
acetal shortens segments.

(note article by Longabaker on Acetal – EES Est
(Also data by P. Bergman may be exp. by
prem pentothal)

Relation of threshold to degree of Induced EES –

#25 No relation of initial threshold value ± eventual EES response.

→ Be done ? summarize for 10 subjects

2-14-58 Staff Conference

1) Need for psychol testing - perceptual - after drug - acute effect

2) In Ect pts, predict the behavioral response for psychotropic & somatogenic status

3) J. Jaffe:

Describes pattern for communication [illegible] interview

(A) Use of these techniques for evaluation of improvement -

Need for pre Rx and post Rx study -

In successful Rx, rise in TTR

" unsuccessful " dec " " or stays same

(B) As a measure of Eq - ratio between present references & past references is effective

This may be broken down to:

Low TTR = repet = verbs high

present high

Ref: Gottschalk

adjustment or life related to verbal behavior -

Psychotics - high # verbs

" # self reference

low - group " (we, us)

ppn - Mean # verbs present tense, Doc + Pt

meprmnt = dec in mean # verbs pres.

mnmp = increase " " "

Discrimn centered about validity of lumping pres. - past

- data is interpreted + stored in terms of meaning, not the actual verb.

	Grades PreK	5	Grades 10-12
14	14-14	14	14-6

L 957
NOV 1 957
EST 1, 4, 5, 6

	79		73	
70				
66	66			
	63			
59				
58				
57				
	55			
54				
	50	50		
46				
44				
44				
	42			
41				
			39	
38	35	36	38	
31	29	34		30
27		28		
27				
		25		
		24		
23		23		
	15	18		
7	11	15		14
	5	14	10	
		14		9
	0	13		8
				7
				7
				4
				2

(28) (12) (12)

Needs

43.75 37.50 24.50

4 (160

~~8~~ 81

12 241

20.08

Median for whole (30)

NOV 1 9 '57

$\frac{19}{9}$	$\frac{3}{9}$	$\frac{4}{8}$	$\frac{7}{17}$

14	12	
19 (4.5, 20.25)	7	26
14	12	
9	17	26
28	24	52

1.45
1.45
1.69
1.69

$\chi^2 = 6.28$

$p < .02$

INDIVIDUAL PSYCHIATRIC TREATMENT INDICATIONS

Paul H. Wilcox, M.D.

Revised Nov. 21, 1953

IF PREDOMINANTLY NEUROTIC (Psychosomatic symptoms, anxiety or reactive depression)

and if Org., B.P., F, Nm, Ag, s, O-C, G, H-A, Ir, Un, Cf, or Par, start with Sequence I

otherwise start with Sequence III

IF PREDOMINANTLY SCHIZOPHRENIC

and if D or Ag, start with Sequence II

otherwise start with Sequence I

IF PREDOMINANTLY ENDOGENOUS DEPRESSION OR MANIC

start with Sequence II

Sequence I — E.S.nc.
- if Eu → CO_2nc. (III)
- if Tr → CO_2 (for termination of trance)
- if D → E.C.T. (II)

Sequence II — E.C.T.
- if C → low E.C.T.
  - if C → E.S.nc. (I)
  - if O → CO_2nc. (III)
- if O → CO_2nc. (III)
- if c → high E.C.T.
  - if C → (III)
  - if A → E.S.nc. (I)

Sequence III — CO_2nc.
- if t → CO_2 (IV)
- if T → E.S.nc. (I)

Sequence IV — CO_2
- if t plus O → terminate
- if D → E.C.T. (II)
- if T → E.S.nc. (I)

Note: Appropriate psychotherapy should accompany all phases of treatment wherever indicated. The goal of therapy is for the patient to have a mild CO_2 reaction (t) and be essentially symptom-free (O) for an observation period of at least two months.

Key

A - anxiety increasing
Ag - agitation
B.P. - systolic B.P. over 170 mm. Hg., systolic
c - brief confusion (e.g. only 5 min.)
C - prolonged confusion (e.g. more than 45 min.)
Cf - clinical confusion
CO_2nc. - non-coma CO_2 (whiffs)
CO_2 - coma CO_2
D - persisting or increasing depression
E.S.nc. - non-convulsive electrostimulation
E.C.T. - electroconvulsive therapy
Eu - euphoria
F - marked fear and anxiety
G - severe guilt feelings
H-A - marked hate and aggressive tendencies
Ir - marked irritability
Nm - severe nightmares
O - symptom-free for 2 mos. or more
O-C - obsessive-compulsive features
Org. - organic changes
Par. - paranoid trends
s - sleepless
t - mild tension
T - mounting tension
Tr - prolonged trance state
Un - unreality feelings

	Chlorpromazine	Promazine	Perphenazine	Imipramine	Reserpine	Benactyzine	Trifluoperazine	Barbiturate
EEG								
Delta	++	++	++	±	+	−	−	−
Desynch.	−	−	−	+	+	+	−	−
Beta	−	−	−	−	−	−	++	++
Clin								
Seizures	++	++	?	+	+	−	−	−
Seizure Protection	−	−	−	−	−	−	+	+
Parkinsonism	++	+	+	±	++	−	−	−
Depression	±	?	?	+	+	−	−	−
Withdrawal	±	−	−	−	±	−	+	+
Sed Potentiation	++	+	+	+	−	−	−	+

Summary of Clinical Data - ~~Affective~~ Related Potentials

Drug - EEG

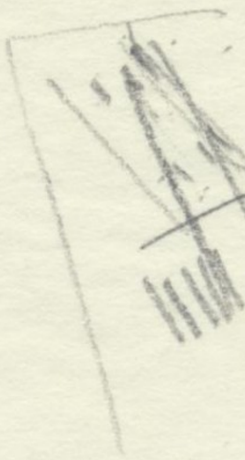
9-20-57

In studying drug effect on brain function, classification according to locus of action is poor. Descriptive effect are better. It is not the locus that counts - it is the pattern of reaction.

1) Calibration : Schedule

Reset settings for ERS

2) { subject
   { analysis / data



→ → →

AUL • 5'58

MAX FINK, M. D.
275 MIDDLE NECK ROAD
GREAT NECK, N. Y.

HUNTER 7-4542

I Complete Control Study

1. Increase N from present 6 (7 incl. GK) to 10 or 12.

What Ss?

4 EEG's per Ss. Time: approx. 2 weeks.

2. Frequency analysis on all EEG's.

None so far.

For N=10 this requires 40 separate counts!

Hanna can count 3 EEG per hr.

(3 graphs require additional ½ hr.)

3. Statistical analysis of EEG stability over time.

To duplicate Uhlt's analysis would be very time consuming & time be used some special techniques developed by bus statistician Glaser.

We could do some simpler techniques:

a) M and SD for δ, θ, α, β_1, β_2 over 4 records in each S

b) M and SD for above activity for group.

Jean's help is needed for this for several

days. In addition I would first have to set up the material which is tedious & time consuming.

As an alternative we may be satisfied with a rough index of variability such as range, Average Deviation and present this graphically.

4. Relation of α index to CFF.

The pertinent EEG info. is readily available from 2).

The following points are of interest but are less important, esp. in term of additional effort required.

5. Relationship between height of calibration signal and analyzer activity output for one or several given frequencies on a particularly stable record.

6. EEG profile for different parts / Lead (à la Kennard) We could do 1-4, 5-10, 3-4, 5-1, 1-11.

7. Relationship between IPS and EEG. As function of amplitude, dominant frequency, α-index.

8. IPS stability over 4 records per S.

9. Relationship between changes in analyzer write-out and our numerical code over 4 records per S.

II Drug Study

Enough pts. are now available to conduct a preliminary analysis.

a) Chronic admin.

1) Are there any apparent systematic or regular changes as f(drug) or f(drug + pt. EEG predrug).

2) How does variability of control gp. compare ± extent of change in B gp.

3) Relate predrug EEG (T5/4) to CFF (3+)
drug EEG to CFF
Δ EEG to Δ CFF. ←

While attempts to relate EEG patterns to other variables under study would be desirable, I believe it would involve too much extra work and ineffectively duplicate some studies which will have to be done later on.

Likewise an EEG profile analysis may be desirable but not feasible.

b) Acute admission.

This material, if worked up intensively, may be enough to provide an independent study.

It involves:

1) 2 Frequency counts per record.
   { One for higher volt. period
   { One for flat, slow "
2) Definition of time relationship of changes.
3) Specification of α-shift.
4) Relation to preceding EEG
5) Review of literature on CP admission.

III Complete paper on EEG - personality correlates.

This involves about 4-5 days of outside library work prior to writing.

IV Review EEG settings.

J

5/6/60

Report of hyperamine react to tolerance

to theories of Schizoph.

LCT eq also persistent

↓

Percent eq. // for

Single Standard

∴ schiz studies of serum may not show central

chemical basis

Resp. also for theories of personality $\overset{vs}{\rightarrow}$ behavior

MAY 16 1980

Dream Behavior

(1) Reported recall in depression

(2) Cg. Ē Rx in Depr. – esp a) ECT b) Drugs.

(3) { wt gain / sleep disturb } w. Rx of depr

(4) Effect of drugs on dream behavior { Reserp. / Tofranil

Dorwart

Dr. Bordeaux
Dept Psychol.

Arthur Shapiro

Internist

Psychiatrist

Berman.

Elgn AFB

Sorrer

Eating behavior & hallucin activity

Dream Depression → wt eating

Fort Bliss

Stages of sleep. Rules

Dream behavior – EEG

FRINKS

5/9/61

Communicat- calls)
~~Destruction~~ of orthoptera very ↓ temp -
+ apparently response rate of females -

Jamed ECT - brain alkal ~~to~~ be ~~equiv~~ a desired change
destroys communic patterns & less destruc -

Could chicken be patterns of communic of destroys?

If so, do the neural class differences not affect
the treatment process by producing
cues which are only poorly understood.

Can this be demonstrated Experimentally?

(Research) Changes in behavior is observable phenomena - verbal / etc
" " imp. however must be interpreted
as communication (although -
can change in behavior be interpreted as eg a ~~behavior~~ communic?

Org Pt = Psych Pt = alteration communication
too much too late at wrong time } = Disturbed
little too early " " place } Communicat.

Quick

Theories of Therapy:

- Uses - interference
- Ease of communication -
  - symmetrical communication
- Correct model - ideal model
  - compared to reality
- Stimulating appropriate behaviors

more testable -

single features do not permit good practice

Therapy = regulatory communication

3/9/58

~~3/9/58~~

Seizure threshold : Delta threshold v ECT?

Is there a relationship between the barbiturate threshold of beta ~~with~~ hypersynchrony and a delta index reflecting pt.

If one were to plot the delta % time

or " freq. cg. ~ ECT over time,

will an inflection pt occur?

will it be related to barbit infl. pt?

Definition of Comfab. vs. Person. Pace of testing as parameter

"Anywhere else" only asked when a mistake has occurred. i.e. = "Wrong"

Interpolated Sum of ∠C-LH + ∠C-RH constituted a change of set + brought out more errors in the abnormal EEG group.

Concl. - Non-interpolation in this case made test too easy for either group. (Either sets it may make it easier) Asking anywhere else was too much of a burden for controls to comprehend + make.

Concl

APRAXIA

Catatonia - ? catalepsy

symbolic signs of catatonia?

- ~~ay~~
- verbal
- non-verbal lang

"retreats to catatonic level" "regression"

locus of action of catatonic states? in CNS -

Brain stem plays a role in conditioning, intelligence -
interrelationships how? →

diff between obs'n

depend more on diff in observer than

diff in observer

Frame of Ref determines obs'n.

Perceptum
12-18-56.

In summarizing the D.S.S. studies for the Academy of Neurology, it was apparent that the threshold D.S.S. testing situation was a rigid and highly suggestible interaction. Since the incidence of confabulations had been high in the psychomotor group of SST #4, we had agreed to alter the situation by not asking "Anywhere else" after each response. Also, instead of threshold stimulation 10% above threshold was used.

Under these conditions, no displacements or confabulations were observed - even in patients with middle to high EEG abnormality.

The procedure was then changed to threshold stimulation but without any inquiry.

Conclusion: The inquiry is fundamental to the phenomena of confabulation and probably to displacement as well.

Factors in confabulation: Personality (suggestible)
set (query)
alt. in ter. fx
stimuli at or near threshold

The same factors operate in displacement, although

alteration in brain fx is obligatory in displacement
for displacement to space, and probably
allesthesia, pointing to locus of stimulus is
essential, for verbalization is never to space

Other factors include:

1) rate of application of stimulus
2) anxiety, tension, preoccupation of subject.

The d.s.s. situation should be re-assessed as a figure-ground descrimination task in a specified setting, with organic mental changes as one determinant but command, suggestibility, etc. as equally significant variables (as age).

Reassessment of DSS: 12-19-56

Basic perceptual process is abstraction
Depending on "set" - i.e. the command
personality of subject, relationship
of A+B, and the degree of altered
brain fx, other phenomena as
confabulation
displacement
Exosomesthesia } appear.

These phenomena are more the product of the
interaction and less the result of sensory
apparatus change.

EST- Cholinesterase

12-22-56.

① After surveying the initial experiments of Sherwood and Feldberg. The relation to EST seemed to be as follows.

Cholinesterase, a transmuscular, alters schizophrenic withdrawal. It does so for days. Other agents as flaxedil, Quaternary ammonium compounds do so transiently.

EST produces increase in CSF Ach, and dec Cholinesterase.

Perhaps, biochemical basis of behavioral change is the maintenance of an adequate Cholinesterase level for a time sufficient to inhibit cerebral over-activity (i.e. cerebral perturbations too fast + too widespread - i.e hyperalertness modified + hypo-alertness).

Hypothesis can be tested by determining Chol E levels in CSF in improved (sustained) and unimproved + improved (unsustained) patients.

② Can we assume that all patients respond to

ECT by free ACh ; or that free ACh in all patients leads to increased ChaE levels? Perhaps ChaE production is not a universal response.

Consciousness

12-22-56.

12-24-56

Every act must be considered in terms of biography.

The brain is the special ganglion that alters the

sensory → soma → sensory cycle by introducing

temporal
~~frame~~ and spatial coordinate changes.

Consciousness : The awareness of ongoing

external or internal events (sufficient to orient) the organism to the present, future and past consistent with the neurologic state of development.

i.e. : the ability to make adaptive (best for the organism at the time Ref Allport's "Becoming" pp 82 - 88) choices under the conditions apparent to the ~~organism~~ observer. From the organism's point of view consciousness is always Complete.

Corolary : To the extent that Consciousness is incomplete, the organism "adapts" by closure under the stress of environmental (external or internal) pressure.

Corolary II : The goal of psychotherapy is to bring sets

consciousness (awareness) internal (biographical)
events that are defensively out of awareness
through limiting of awareness, and therefore, of
activity. i.e., to free the cerebral ganglion
of certain temporal or spatial programming
circuits that are no longer (historically) useful.

Consciousness

12-25-56

Consciousness:

Psychiatric:

Assuming intact neurologic organization appropriate to stage of development (i.e., adequate programming). the central ganglia bring to awareness

1) Historical information - both analogic and digital

2) Select figure from ground

3) Alter temporal response to sensation

4) " spatial " of movement.

One fx of consciousness is to protect organism against (The:) decalcification.

(2) temporal - spatial activity to alter, avoid, clear threat

(1) perceive threat

(3) program response to similar threats.

If (2) fails, then organism protects by diminished awareness (② denial, ② repression, ② Fugue, ② Fit, ② Hallucination, ①+② dream, ① displacement from center of field, change in tone, ① change in size (spatial coordinate))

which may be focal (to discrete event) ①

or General (to all activities) ②

Conscioness

1) Psychiatric

Repression + denial mecanisms

awareness - descrimination.

Failure of primary defences →

flooding of CNS with percepts, interpreted as

threat,

↓ (?) ↘

hyper-alerting ← (exc adrenalin ?)

↓

insomnia, inability to feed, → (A) → Depression

loss of sex

Internalized
Not dissociated

↙ (C) ↓ (B)

delusions, hallucs, panic

Paranoia dissociation

Catatonic "

2) Neurological

a) Loss of sense organ-tract dom perception

b) depth of brain stem → sleep stupor etc.

(over)

b) Neurologic: structure of consciousness

1) Selectiveness of pathways (i.e. receptor ← effector
↓ ↑
Lesions lead to loss of sensory path. neuron
↓ ↑
information → loss of Ganglia → cortex)
awareness

2) Feedback of pathways - (i.e. α + β activity - desynch.
↓
with fast rate + alt. α+β ō occ. 6-7 cps
↓
all channels open random 4-7 cps
↓
prob. dependent on Cont. or burst 2-5 cps.
(synchronized)

a) Biochem. parameters (adrenaline thyroid etc)

b) electrical parameters as peter act psy.

3) Development of pathways -
"programming"

4) Experience : previous training - development
of programming

5) Set, attention, selection of stimulus from background

EST Mechanism

Depressive Psychosis

A/ In disordered states (psychoses) there is hyper-alertness to threats.

the ability of ganglia to protect the organisms awareness from being flooded by stimuli has failed

1) All functions are flooded with information about threat [= pre-occupation]

2) Temporal + Spatial displacement is not successful [self characterization]

3) Perception is indiscriminate with all stimuli interpreted as threatening.

this over-stimulation leads to hyper-alertness. [insomnia anorexia fast EEG]

Physiologic state = high adrenalin

= " ACH in CNS

= desynchronization of CNS
(too fast scanning?)

B/

EST: (1) Trauma to ganglion =

a) digital dysfx [memory loss ? frontal dysfx (?)]

b) free ACH → inc. Chol E. in CSF (note bleeding in Depr. ECT)

(2) ↑ ACH as cause of fit

3) As ACH repeatedly occurs, ↑ Chol E [neural threshold]

Critical step → 4) ↑ Chol E persists — floods ventricles
affects ganglia by interrupting
rate of electrical activity

5) Synchronized SEG
+ rec sleep
+ " feeding
+ diminished perception (cf A-1, A3)

6) To the extent that past experience
allows, closure, temporal (cf A-2)
& spatial displacement non
operative again

7) Personality (i.e. past adaptive
programming) determines
extent of (6). It also
determines the type of
response of organism when
flooded with threats (A)

Schizoid Psychosis

Schizophrenia -

Consciousness is overwhelmed by perceptions that cannot be acted out - repressed - channelled. Displacement is prominent

S d. K.

Amytal Test
Organic Mental Syn.

12-31-56

While the amytal test has been interpreted as a test of organic cerebral dysfunction, it does so as measured by two indices: amnesia and anosognosia, expressed verbally; and associated with confabulation.

Other changes induced during altered brain function after amytal include:

1) Language changes (i.e. III person, displacement, etc)

2) Non-verbal communication - as putting up, withdrawal, reaching for cigarettes, "sexual" motor patterns (repetitions)

3) Inability to obey commands - or inability to obey 2 commands at a time.

4) Emotional changes as crying, anger

5) The specific measures now used as:

(a) beta response to the EEG (Sed. thresholds)

(b) delta response in the EEG post hemi

(c) Language variability - TTR measurement

These changes, too, are "indices" of altered brain function. Some may be more "objective", i.e. less dependent on the operator's language or accents than others and therefore, may

warrant further study. Also, some may be less dependent on personality factors.

Conclusion:

1) "Amobarbital Test for Org. Brain Dis." be shortened to "Amobarbital-Disorientation Test" or "Amobarbital Confabulation Test"

2) other aspects of behavior, other questions be assessed for "index of alt. br. fx."

January 9, 1957

For creative activity, as possibly, for problem solving, the hyper-alert state must be avoided. In the alerted individual, discrimination is more focused, acute, and differences are sharply maintained. Under such conditions, old pathways are clearly maintained and the possibility of new associations is less.

For creative work, pathways must be connected that were not connected before. This can only be accomplished if discrimination is diminished. This is done by reverie; by fatigue (creativity late at night); by isolation; ? by alcohol; etc. Perhaps in the EST situation, the cerebral state induced is similar to drowsiness (surely the EEG - perceptual effects are similar) and thus the patient is able to use ("create") new defenses which were not available before.

Also, in the tachistoscopic situation, the presentation is a hyperalerting situation - but, the reverie state (or dream) afterwards, permits of greater elaboration of the memories (greater range of imagery = greater creativity.).

1/23/56

In like fashion, the hyperalert state must be avoided for orgasm - for sexual or other pleasurable satisfactory state. In this way, the aphrodisiac qualities of drowsiness, alcohol, shyness, wine, etc. may be misinterpreted.

January 7, 1957

Role of Altered Cerebral Function in Behavioral Change Following Induced Convulsions

Max Fink, M.D., Robert L. Kahn, Ph.D. and Hyman Korin, Ph.D.

The role of altered consciousness in the clinical behavior of epileptics, patients with mental disorders, and in the diagnosis of disorders of the central nervous system is unclear. Recent studies of the electroshock therapy process demonstrated the crucial nature of persistent alteration in brain function for the behavioral changes induced. In the course of these studies, an appreciation was obtained of the types of alteration in behavior induced by diffuse cerebral dysfunction; the role of the premorbid personality in the behavioral pattern; and the sensitivity of various tests as indices of altered brain function.

Problem: To define and measure the effects of alteration in consciousness (resulting from diffuse cerebral dysfunction) on clinical behavior patterns.

Method: Subjects on a voluntary psychiatric hospital referred for electroshock therapy were studied concurrently by psychiatric, psychologic and neurophysiologic technics.

1) Alteration in brain function (the degree of organic mental syndrome) was measured by four indices:

(a) Electroencephalograms, measured for per cent time delta under resting and activated conditions;

(b) Disorientation, confabulatory responses and language changes following intravenous amobarbital.

(c) Diminution in perceptual discrimination of simultaneous tactile threshold stimulation tests.

(d) Interference with recall of 3 letter words after interpolated learning of nonsense syllables ("retroactive inhibition of recall").

2) Behavioral changes were measured by repeated psychiatric interviews with subjects; and reports of therapists and hospital personnel during and after the period of therapy.

3) The premorbid personality was estimated by structured interviews with relatives and by Rorschach tests (scored for M & C responses).

Results:

1) Modification of behavior is related to the degree and persistence of alteration in brain function, as measured by the electroencephalogram, amobarbital tests and perceptual discrimination tests.

2) The pattern of the induced behavioral change, manifested by changes in language, mood, attitudes and symptoms, is related to the premorbid personality structure. Such behavioral patterns as euphoria, denial, withdrawal, severe memory loss and disorientation, paranoia, hyper-irritability and increased anxiety, have been observed.

3) Various indices of altered cerebral function have different sensitivities to modification depending upon the extent and activity (recent or old) of the dysfunction, and the personality of the subject.

Conclusion:

1) Behavioral modification in conditions inducing altered brain function is the adaptive response of the organism under the condition of an alteration in the state of consciousness.

2) The type of adaptive response is dependent upon the premorbid personality of the subject and the milieu in which the behavior occurs.

3) Tests of altered brain function must be interpreted in terms of their sensitivity; their time of application in the ongoing process; and the premorbid personality of the subject.

The significance of these observations in the understanding of epilepsy; the treatment of mental illness; and in thedefinition of altered states of consciousness will be discussed.

From the Neurophysiology Laboratory, Department of Experimental Psychiatry,
Hillside Hospital,
Glen Oaks, New York, U.S.A.

January 7, 1957

Therapy of Schizophrenia: Effect of Alteration of Brain Function on Behavior

In the course of experimental studies of the mechanism of action of electroshock therapy in patients with psychiatric disorders, a hypothesis was elaborated regarding the mode of action of other therapies in patients with schizophrenia. It has been demonstrated that the essential pre-requisite to behavioral change in electroshock therapy is a sustained degree of altered brain function as defined by EEG delta, loss of discriminatory ability on perceptual tests, and disorientation following the administration of amobarbital sodium. The behavioral response under the conditions of an altered state of nervous system activity is an adaptive response of the subject, dependent on the premorbid personality and the environment.

Similar factors have been demonstrated as operating in patients who show sustained improvement following insulin coma therapy.

Ongoing studies of drug therapies in schizophrenia demonstrate that the therapeutic efficacy of the newer psychopharmacologic agents is directly related to the degree to which brain mechanisms are demonstrably altered.

Conclusion: The mode of action of the various physiodynamic therapies (ICT, EST, Drug) is directly related to the degree of sustained alteration in brain function induced; such alteration being defined by changes in the resting and activated electroencephalogram, disorientation tests, and perceptual discrimination tests.

Effects of Diffuse Altered Brain Function on Perception

Max Fink, M.D., Robert L. Kahn, Ph.D. and Hyman Korin, Ph.D.

Problem: Recent studies of the relation of perceptual alteration following brain damage have emphasized the role of focal damage. To determine the patterns of perceptual changes to diffuse alterations in brain function, the following study was undertaken.

Subjects and Method: Consecutive subjects in a psychiatric hospital referred for electroshock therapy were studied. Alteration in brain function was induced by varying the frequency, number and severity of the induced convulsions. The following tests were applied before treatment, at weekly intervals during, and two weeks after treatment terminated.

a) Measures of altered brain function: Two quantitative indices were used to determine the degree of altered cerebral function:

1) The per-cent time, amplitude and lowest frequency of the induced delta response in serial electroencephalograms;

2) Changes in orientation and in language following the administration of intravenous amobarbital sodium.

b) Perceptual tests:

1) Tactile: Threshold perception (100% point) of square wave electrical stimuli was determined for different body areas. Stimuli were then applied simultaneously to two body areas, with interspersed single stimulations in random fashion; and the subject asked to report what he felt and where.

2) Visual:

a) Figure-Ground: Using embedded figures (Gottschaldt) of increasing complexity, subjects were requested to identify a simple geometric figure in a complex background.

b) Tachistoscopic Recognition: Paired words were presented at rapid explosures to subjects. The words were matched according to tables of frequency in common usage; and were of two groups: relating to illness or to the body, and those not relating to illness. Words were matched randomly.

Results: 1) With increasing degrees of altered brain function, there was increasing errors in reporting the simultaneous tactile stimuli. There was a concomitant rise in the threshold of perception. With high degrees of cerebral dysfunction, mislocalization of responses appeared, in addition to the persistent failure to report one of the stimuli.

2) The ability to isolate embedded figures was impaired in direct relation to the severity of the alteration in brain function.

3) Threshold for the perception of words increased and subjects were unable to identify two words with increasing degrees of cerebral dysfunction.

4) Changes in perception were highly correlated with other behavioral changes, indicative of an altered interaction with the environment.

Conclusion: 1) Diffuse alteration in brain function, as measured by electroencephalographic delta and orientation tests after amobarbital, results in alteration of perceptual patterns marked by an increase in threshold, impaired discrimination of stimuli, of which the ability to discriminate a figure from a complex background is a special example.

2) Alteration in perception represents one aspect of an altered behavioral interaction with the environment, rather than a specific physiological defect. This factor should be considered in perceptual studies in focal brain lesions as well.

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Concept of Cerebral Localization vs Mass Action Effects

1) Certain functions ascribed to CNS are "localizable", as vision, motor power, motor aphasia; while others, as memory, judgment, insight, calculation, figure-ground, are non-localizable. The first group are cortical (more peripheral than central); damage is generally permanent; small lesions have marked effects; and EEG is usually not pathological.

The non-localizable lesions are generally deep or basal; recovery of function is possible; small lesions have no effect (i.e. a mass action law is applicable) and EEG effects are prominent.

2) EST results in a non-localizable lesion - with diffuse dysfunction. It is the technic par excellence to study such mass action lesions.

3) Psychological tests of "OMS" are positive to the degree that they measure mass action effects rather than focal - except if focal dysfunction interferes with performance as in lesions affecting vision, motor power and speech.

4) Concept of Active vs Static Lesions:

In studies of head injuries, lobotomy and post operative cases of six or more months duration, the studies reflect localizable (cortical) defects mainly: for the deeper activities are no longer active. Any defects in function are expressions of specific cortical localizable damage.

In contrast, studies of brain tumors, immediate post-traumatic states, post-lobotomy, and EST (early) are studies of active dysfunction - a combination of the focal and the diffuse defects. The degree of dysfunction depends on the mass effect, plus the localized defect.

see Gooddy, "Cerebral Representation", Brain 79: 167-188, 1956.

EEG - EST

12-11-56

The degree of EEG abnormality is related to alteration in central mechanesms - i.e. deep (brain stem or thalamic). The factor of free Acit described by Bornstein et al can be related to the behavioral change by noting the studies of Feldberg, introducing drugs into the ventricles.

Experimental Studies of the Mechanism of Electroshock Action

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Aims: To elucidate the neurophysiologic and psychologic mechanisms of electroshock action, with emphasis on the factors underlying clinical "improvement."

Method: Consecutive patients referred for electroshock therapy were studied by the following technics.

1) Alteration in Brain Function: serial weekly electroencephalograms, amobarbital tests for brain dysfunction and threshold simultaneous tactile stimuli were used as indices of change in cerebral function.

2) Personality: Rorschach tests, structured family interviews, and tachistoscopic perceptual tests were utilized in determining premorbid personality and patterns of adaptation.

3) Behavior: Weekly psychiatric evaluations and analyses of language patterns in recorded structured interviews.

Subjects: The "experimentsl" group consists of 85 consecutive electroshock patients who received 12-20 grand mal convulsions by either Reiter unidirectional or Medcraft alternating current instruments under pentothal premedication.

The "control" group, recently instituted, consists of 20, randomly selected electroshock referrals who received 15-20 subconvulsive bitemporal electrical stimulations under pentothal anesthesia with the Reiter electrostimulator.

This control series is still in progress.

Findings: 1) Alteration in cerebral function, as measured by early and significant changes in the electroencephalogram, amobarbital tests and perception of double simultaneous stimuli, is a necessary prerequisite for behavioral response in electroshock therapy.

2) Patterns of behavioral change manifested by changes in language, mood and symptoms are related to the premorbid personality as measured by the Rorschach (analyzed for movement and color responses) and structured family interviews.

3) The psychiatric rating of improvement is dependent on the subject's

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behavioral adaptation under the conditions of altered brain function; the duration and degree of such alteration; the persistence of the behavioral adaptation under the stress of the subject's return to his own environment; and the expectation of the therapist and the family.

Conclusion: Electroshock therapy is a non-specific traumatic induction of states of altered cerebral function to which the subject reacts with a variety of adaptive behavioral and language changes, dependent upon his premorbid personality. The rating of "improvement" is a derivative conclusion made by the evaluator and dependent upon the patient's morbid behavior, his environment, and the expectations of the evaluator.

The significance of these observations and conclusions for the mechanism of lobotomy and insulin coma therapy will be discussed.

(July 2, 1965)
Jan. 3, 1958

MODE OF ACTION OF BIOCHEMICAL AGENTS IN BEHAVIOR

The CNS is dependent upon a number of enzyme systems for proper metabolism and function, including cholinesterase-acetylcholine, glucose-phosphatase, etc.

The variety of agents that affect CNS function and, thereby, behavior is large, since processes in equilibrium may be shifted in either direction by increasing or decreasing the available quantity of a metabolite.

A. For drug action, therefore, the following are considerations in potency:

(a) Does a drug affect an enzyme system in a reliable way?

(b) Can it get to CNS to affect the system?

(c) What defenses does organism process to block or limit drug's action once in CNS?

B. Secondly, while an agent may directly affect the metabolism of a specific system, to what extent is the CNS dependent upon the system? Is the defect thus induced significant for the metabolism of CNS underlying behavior? What defenses can body call into play when system is affected to substitute other energy systems?

Thus, the variation in drug effects in behavior depend upon:

(a) Behavior at onset; and predisposition (personality) to response;

(b) Drug dosage - availability to CNS and the effect it has on an enzyme system;

(c) Dependence of organism on specific enzyme system - and organismic defenses (i.e., substitution for affected system).

(d) Whether effect was gradual (allowing for defenses, i.e., alternate metabolic system) or acute (not allowing defense).

Individual differences in response may be due, thus, to differences in:

(a) Dosage, ratio & route of administration

(b) dependence on the affected system

(c) adaptive ability to biochemical changes.

To these changes, EEG is a gross approximation and indicator, reflecting the homeostatic balance in various enzyme systems of the CNS.

Jan 23, 1957

The ability to orient oneself - and to maintain it is dependent on a number of factors including:

1. Personality organization:

As a result of the interaction of inborn degrees of maturational alertness and abilities, and early social experiences, needs and demands, a hyper-orienting or a hypo-orienting attitude is developed.

Such variation may be characterized by "H" Rorschach, "sharpeners" vs "O-H" Rorschach and "levellers."

2. State of cerebral activity: Under conditions of diminished consciousness, as following trauma, drugs (barbiturates), isolation, fatigue, etc the ability to maintain orientation is impaired. Conversely, under conditions of stimulation as stress (sometimes), stimulant drugs, interview situations, the degree of orientation may be increased.

3. Situational Factor: If motivation is high, or needs are marked or situation particularly

demanding, the degree
of orientation may increase.

these factors can be described in table:

Inc. Orient.	Dec. Orient.
Cortical Early Develop.	Non Cortical.
~~It~~ Sclerosed Sclerada.	Functions at a very rapid rate
Regression	Anaerobic tal
	Awareness / fatigue

Psychoses - Etiology

Jan 29, 1957

In an explanation of the role of drugs, electroshock, etc in psychiatry, it is apparent that no method now available alters the basic processes pathogenetically. In this respect the psychiatrist is not unlike the internist treating hypertension: a syndrome of an unknown causation with specific manifestations. While much has been written + developed about the cause of hypertension, there is insignificant compared to the management -

In like manner, perhaps anxiety is the manifestation in the CNS and in behavior of the same "disorder" that is behind hypertension. Both may represent a developmental biochemical disorder - only the manifestations differing.

If the analogy can be sustained, then the basic therapy is biochemical.

Quantitative EEG

1/31/57

Relation of EEG changes & clinical behavior change:

Our indices of alteration in EEG measure one aspect only - i.e, the presence or absence of slow activity, and its type and quality (burst). No cognizance is officially taken in the pairings of the changes in: alpha amount and frequency,
beta " " "
modulation of record
reactivity + type of response to
hyperventilation
amytal
alerting (eyes open, problem solving).

Perhaps a better correlation of changes in behavior and EEG can come by estimating changes in a "profile" - which will set some rating on an absolute scale for each variable + define its degree of change, with reference to a set scale of criteria - but which can then be ~~as~~ understood in terms of the initial record.

"Dynamic Electroencephalography"?

Such a concept as ESB is not available
the relation of Quant. to qual. Chemistry.

Personality-O.M.S.
Tests of O.M.S.

2-5-57

All our tests of changes in cerebral function tap a continuum. The degree of cerebral dysfunction at the time of examination will determine which tests will show changes in patterns.

The degree of cerebral dysfunction is dependent on numerous variables including:

Rate of development of dysfunction

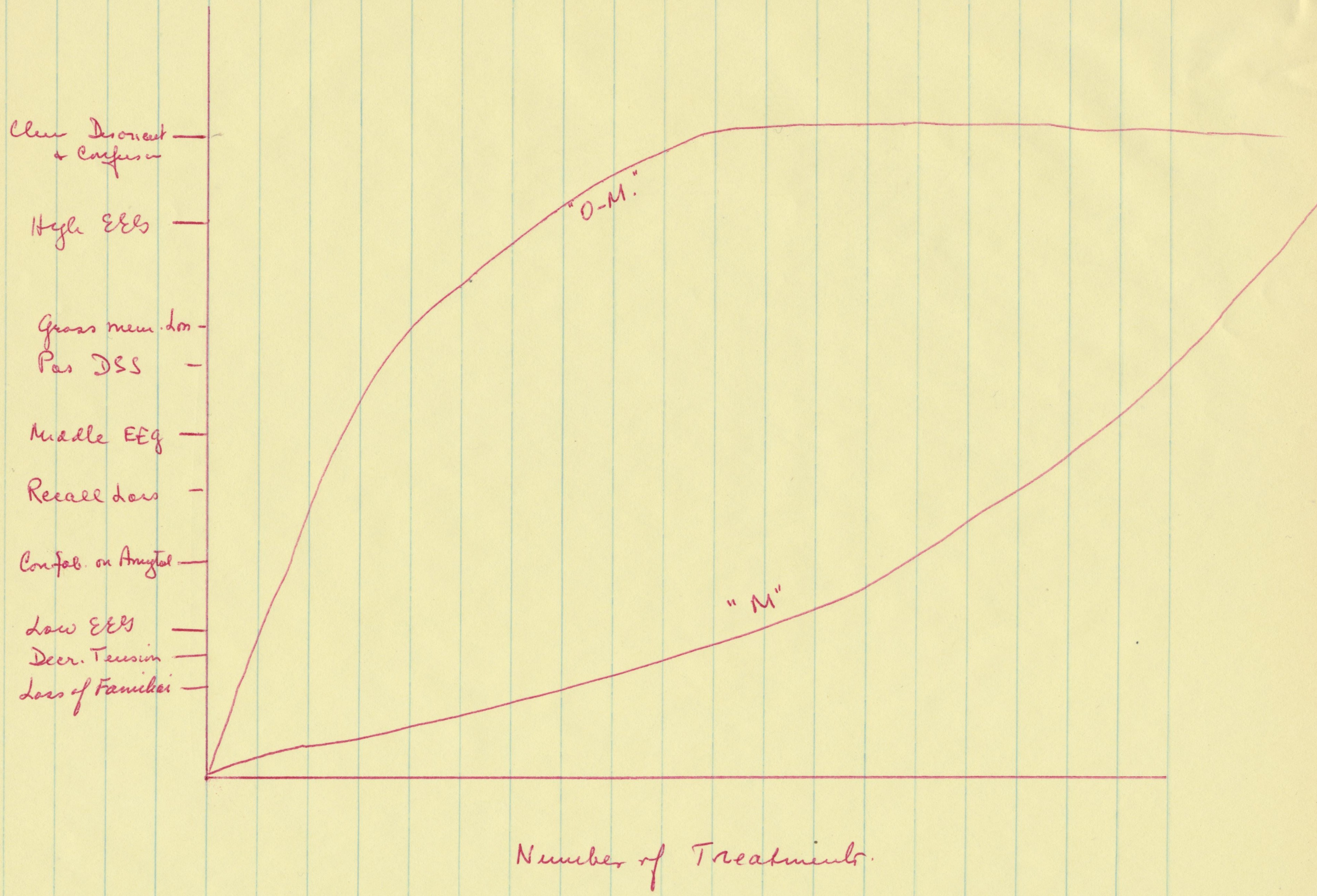
Premorbid state of functioning on the tests employed

Stress of the examination-- needs and motivation of the subject

Localization of the cause of the dysfunction (local vs. diffuse)

One factor, the premorbid state of functioning, as characterized by the present evaluations of personality organization by the Rorschach test and by interviews, can be pictured as operating in the following graphic fashion:

2/5/57


Clear Disorient + Confusion
High EEG
Grass mem. dm - Pas DSS
Middle EEG
Recall Loss
Confab. on Amytal
Low EEG
Decr. Tension
Loss of Familiar
"O-M."
"M"
Number of Treatments.

Ego in Contemporary Psychology 3/20/47

Gordon Allport - Psych Rev. 50: 451-469 1943

Main conceptions of Ego.

Knower

object of knowledge

Primitive Self-feelings

dominance drive

power organizer of mental processes

skeleton for ends

as a behavioral system

subjective organizer of culture

The critical difference in human behavior is ego involvement or its absence. When the ego is engaged, it acts in several of the above capacities.

Ego involvement is the conduct of total personality of the self.

Experimental evidence:

1) Generality vs specificity of traits in various situations -

Experimental: where there is ego involvement, traits are general; when there is no ego involvement, there are no general traits.

2) Judgment: Judgment of time may be a fx of social platen (ergo other cohes)

ex: open vs. closed balloting

3) Memory: If memory material fails to fit into an ego involved frame, it contorts itself until it does so

4) Frames of reference:

"A frame of ref. serves to signify any spatial-temporal or cultural orientation that relates many of an individuals attitudes, habits and judgments to one another, and influences the formation of new judgments, attitudes and habits."

Not all frames are ego involved - of local -

Under normal social conditions, only a relatively small portion of our culture is ego-involved.

5) Learning: learning proceeds best in positive. To maximize intelligence, one must maximize the ego.

6. Motivation: 2 kinds - ego involved and ego not.

Routine motivation to perform a task is one thing, and that ego charged motivation to excel another. Routine motives yield one set of results; ego motives a different set.

7. Level of aspiration: Subjects behave in such a way as to maintain for self esteem at the highest possible level.

"An Interactional Psychology"

Behavior
EST.

3/29/57

An Adaptational View of Behavior:

Following the studies of Mackerman; the reports of Rado, Wenstein, Roach and Wikler, the following picture of behavior appears.

All responses of the organism are "adaptive" - i.e. the organism will respond in such a way as to minimize pain and fear to the best of its ability. The best of its ability is determined by the personal history of the organism (experience); the genetic history; the environmental factors operating in the situation (interaction, roles, goals, set,) and the internal physiological milieu.

Were it possible to define these various behavioral determinants, it would be possible to define, in a predictable fashion, the behavior of an organism - and to alter the behavior in a predictable way by various manipulations.

The specific determinants of behavior are listed in the appendix - with their studies and means of influencing behavior..

Electroshock is a device whereby the subject's milieu is altered: changes are induced in brain function so that:

1) Perception is less sharply defined
2) Relationships are less clearly identified
3) Recall and associations are diminished
4) Alertness is less.

Under these conditions, environmental stresses take on "new" significance - usually less traumatic, less threatening, if personality permits. Also, preferential communication is less, and ~~perseverative~~ communication more prominent.

Under these conditions, the subject is less threatening, less demanding of the environment.

If the personal history of the subject is such as to maintain the anxiety or to develop other ~~psychoses~~ behavioral adaptations as withdrawal, somatization, projection, etc. the patient will not "adapt" better & will be "unimproved" or worse.

3/14/57

Behavioral Determinants

	Study	Altered By
I: Persistent ("Constant) Determinants.		
(a) Genetic - Species factors	Biol-Genetics	
(b) Early Infancy - Childhood Experience	Psychoanalysis	Interpretation
(c) Group - Family - Societal Factors. Cultural Values - Goals, etc.	Anthropology / Sociology	Education
d) Organismic Endowment (?)		
1. Intelligence - Alertness	Neurophysiol. + Neuropsychol.	Experimental Education
2. Internal Milieu (Hormones)	Endocrinology.	Chem.

II Interactional (Transitory) Determinants.

(a) Interpersonal Interaction:	Psychiatry / Psychology	Interpret. / Re-educ.
1. Type: individ, 2-person, group.		
2. Factors: status + role; goal; motivation; set.		
b) Physiological State:		
1. Organism: fatigue, toxic, hunger.	Neurophysiol	Drugs. Environ. manip
2. Cerebral: alert, non-alert		

Personality

4/2/57

Personality can be defined as those aspects of adaptation to environment which are habitual. It is defined operationally in descriptive terms, usually without definition of the setting - the assumption being implicitly made that the "personality" is constant in all milieus.

The definition is descriptive, stating what classes of responses are most common - most likely to occur in the individual

The adaptation patterns of the individual are determined by:

1) Genetic organismic factors.
2) Past Experience, esp. Childhood
3) Interpersonal setting.

and → 4) The stress: its significance, ego involvement of the subject, its persistence, etc.

Thus, personality is a complex penultant summary of an individual's behavior. It's value for behavioral prediction is problematical. When defined by simple tasks, its predictability is low for specific

wealth. Even after the personality is defined by interpersonal analysis, predictability of behavior, although much better, is dependent on the definition of the plans for reliability.

EST - Mechanism
Depression

4-15-57

Post EST, some patients become more aware of "self"; they manifest more anxiety; express the need for more therapy and less sedation; and note that they have a recurrence of their "feelings.

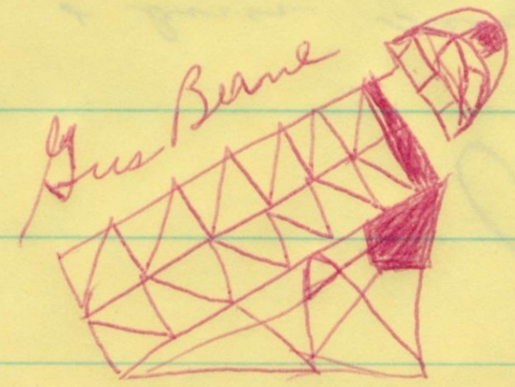
e.g.) Caucas - HH
Schaffer - PP

Imp.: It may be that depression represents a withdrawal from reality with a repression of feelings, and a failure to respond to situations with appropriate emotions. Repression aided by sedation.

The development of O.M.S. with its perceptual and memory changes permits less withdrawal, less repression - therefore more self awareness, more anxiety.

Process: (?) Altered br fx → diminished perception → less frightened → less withdrawal → more "contact" → more awareness of reality - (but only if protected during this period.

Look Back at Bryan
Book at pp. 2 & 3



NOV 1 937

K Freq. cps.	H	M-H	M	L-M	L
12		1	1		III
11-12	II	III			III
11		1			
10½-11½		1			
10-12	1	IIII	1	1	
10-11	IIII	II	1	1	
9½-10½		III	1	1	
9½-11			1		
9½-10½		1			
9½-10	1				
9-12	II		1		
9-10	IIII		1		
9					
8-9	1				
8-10			1		

Record returns to pre EST type.

Dr Fukuda + Ueff:

Rat EEG: 30 cps - 30-50 uv. damage → spike + Δ

↳ very little EEG chg after EST - (15/day)

Enforced activity produces EEG delta cg ~ EST

↳ = ? stress

Enforced act + EST → increased Δ

Atropine blocked the Δ increase from convuls

Pacella { high fast EEG → reduced Δ discharge
high & indeed: eff of → much more EST chg.
8-9 yr 11-12 yr cf → more resistant Δ EEG cg.

no relation & type of work for. Gen's presence

? normal persons show EEG if convulsive EST pre

The reduction in EEG → th. High delta — related to pre-EST basic frequency.

It is essential that the pre-th EEG be rated

Ueff

ATr - 5-10 cup / atropine. effect on behavior.

Chol E	Pre EST	EEG	EST		age
High	Decrease	FAST	Poor	M	49
↓	Normal	High α	Some	M±	mod
Low.	Depr-Exc.	α + Δ	Best.	O.M.	mod → old.

number of patients
EEG x Atropine
" x α Atr
" x slow
" x Atropine ended c EST

EEG should be analyzed for Pre EST record

a) Basic freq
b) α rate
c) ? delta
d) th. response