

DISEQUILIBRIUM AND DEVELOPMENTa look at the
Canadian Contributions

by Marlene King

In order to determine the Canadian contribution to any field of research, it is usually necessary to first research the U.S. literature. If a pattern emerges, one need only look several degrees to the left to determine Canada's position - that of 'little brother' tagging along.

One may be more optimistic in the field of psychology, it seems, for, where the U.S. regards its population as a massive S-R organism, Canada takes pride in its people as being individualistic. This may be a result of one simple underlying factor - geographical location, for, unless you are very independent and individualistic, it is impossible to survive, even physically, in many areas in Canada.

And so, because of, or in spite of this, Canadians consider themselves human beings first and foremost, and, generally, are accorded this dignity by psychologists. The emphasis in Canada is on humanistic psychology.

Factors influencing the conception of man date back, ⁱⁿ the psychological literature, to the Industrial Revolution, when ^{man} was seen as basically lazy. He was provided with incentives and, if he responded, was selected as best suited to a job which was then done in the most economical way.

The labor movement minimized the notions of economic man, aiming at a balance, but World War I and mass testing brought about a psychological revolution from which the western world has not yet recovered. The concept of intelligence and the use of I.Q. tests uncovered a skeleton hanging in the closet - the average man could only read at the 3rd grade level.

The depression years saw an overemphasis on job placement because of mass unemployment and counselling, at that time, was pigeonholing. A developmental concept of man was embraced at about this time, but, unfortunately, it ^{was} only

called developmental. In effect, individuals in the western world are regarded a-developmentally. Magazines and television are aimed at the 11-year age level, hastening a 'regression to the mean'.

World War II had little impact on the now well-established discipline of psychology. The 1950's saw the heyday of Freud, with money available for staff, and projective tests dominating the field. Behavior which was not normal, whether it was sub-normal or supra-normal, was regarded as abnormal. This was the period, when, in order to maintain your integrity, you learned to lie on psychological tests. In order to 'beat the system', young men were advised, when taking psychological tests for executive positions, to remember:

"I love my mother and my father, but my father a little more."

"I love my wife and kids, but nothing will stand in the way of my work."

In reaction to this, the Rogerian influence hit the field, and testing as a means of diagnosis was assigned a minor role. The impact of the Existentialists was felt in the field, one hundred years after it was born in Europe. Sensitivity groups, encounter groups, human relations groups - in short, therapeutic communities sprang up overnight in psychology.

At present, it would appear that this is about 'where we are at.' Americans, under the guise of 'sensitivity groups' are still regarded as a mass S-R organism. Canadians, on the other hand, are seemingly less sensitivity group oriented, but, in actuality, more sensitive - to themselves, to others, and to the consequences of adopting American styles.

How does this tie into the title of the paper? When you talk about disequilibrium, and when you talk about development, surely you are talking about human beings. To understand psychology as a developmental force itself, we must be able to think 'with' and think 'about' its implications for man.

The same holds true for the concept 'disequilibrium'...we may be in a state of equilibrium and regard it as peripheral, or we may be in a state of disequilibrium and regard any further discussion as absolutely terrifying.

Ever since William James offered his theory of emotion a battle has been waged. What is emotion? Is it beneficial or harmful? Supporters have taken up arms for both positions, and, as recently as 1968, in a book called The Nature of Emotion, the editor has presented papers supporting, among others, these two positions: 1) Emotion as Interference and 2) Emotions as Organized Tendencies.

A review of non-Canadian literature revealed that few Canadians are published. Those who are include D. Berlyne, an ex-Canadian, and D.O. Hebb, who has a great deal to say on emotions as a hypothetical construct, a position which I see as a synthesis arising out of the above thesis and antithesis. He feels that emotion can be both organizing and disorganizing. Whichever it is, the subject is temporarily 'e-moved' or moved out of himself, his ordinary way of being.

In reviewing the Canadian books, Karl S. Barnhardt's name came up. His position, in 1945, was that the more emotional an individual was, the less efficient he would become, for when emotional disturbances occur, reasoned, intelligent, efficient action, he felt, was impossible.

Dr. W.E. Blatz, Professor of Child Psychology, U. of Toronto, wrote several books on emotions and the child. He emphasized the negative aspects of emotion and suggested that emotion arises when the individual feels inadequate. However, he argued for control of, not eradication of emotion, a position for which many young people in Canada may now well thank him. Many parents sought his advice in rearing their children. As long ago as 1937 he did a study of emotional episodes in the child of school age, in which he argued that emotional development is a learning process.

Katharine M. Barnham Bridges studied emotional development in early infancy in 1932, in which she observed the emotional behavior of 62 infants over a period of three or four months. It was mainly descriptive, but she concluded by stating that emotional behavior and development are very much determined by particular events and experiences and by the routine of living, adding that 'institution babies' would be different (would show some deviations) than children at home.

D. Berlyne feels that fear, complexity, uncertainty, and conflict (or disequilibrium, as he occasionally refers to it) all contribute to a common fund of arousal. He proposes a theory of conflict, arousal and curiosity, in which he suggests that reinforcement for many activities comes from arousal jags, and that the tasks most challenging - which make one wonder whether they can be handled or not - are those which produce just the right amount of arousal and anticipated arousal reduction. Dember and Earl (1957) showed that the degree of complexity or difficulty that falls within the right range will surely mount higher and higher as the individual's sophistication grows.

The work of Hans Selye and his collaborators on the effects of stressful experiences interested students P.C. Constantinides and Niall Carey, at the University of British Columbia to do a study on the alarm reaction, in 1949. Dr. Hans Selye and his team of biologists at the University of Montreal had been pursuing an investigation for more than a decade into the generalized reactions of the whole animal to the stresses produced by its environment. His conclusion, stated briefly, was "Stress - It's a GAS (General Adaptation Syndrome)" The implications of his findings were felt, at that time, to be tremendous. Many of today's researchers would wholeheartedly agree. Research in emotion more often than not leads researchers to the bio-chemical basis of behavior.

A review of the actual research published in the Canadian Journal of Psychology revealed the following: (there is no attempt to outline trends, the order is merely chronological)

1951 - Malmo, Shagass and Heslam found impaired adaptation of blood pressure to stress in psychoneurosis.

1953 - Newbigging found support for his hypothesis that the degree to which an individual achieves understanding of another, as the other understands himself, varies concomitantly with the degree to which the configuration constituted by the other's behavior is attended to during perception. In this study, the subjects observed figures of reversible perspective, and those who saw the reverses more slowly were better predictors of the other's situation.

1955 - Lovett and Schneider attempted to quantify the emotional aspect of awareness by employing a variable, capillary blood-oxygen saturation. They administered a CST visuo-auditory test monitored by spectroscopic oximetry to healthy and psychiatrically disturbed subjects and found that, in all subjects except psychotics potentially stressful stimuli were accompanied by significant anoxaemia.

1955 - Bindra, Paterson and Strzelecki separated subjects for high and low anxiety on the Taylor Manifest Anxiety Scale and found that simple eyelid conditioning is more rapid for ^{the} high anxious.

1957 - Burns and Cavey tested the empathic ability of 39 nursery school children by questioning them about a set of pictures. The number of empathic responses by youngsters aged 3 to 5 was significantly lower than the number given by subjects aged 5 to 6-and-one-half years. The results were interpreted in terms of the views of Piaget and others on childhood egocentricity.

- 1962 - McNalty and Walters engaged 40 high school boys in controversial topics. Half were given instructions to arouse anxiety and the other half were given instructions to reduce anxiety. Ten boys in each group were given opinions that strongly conflicted with their own and the remainder were exposed to relatively neutral stimuli. The EMG (muscle tension) of the subjects in the high anxious group were significantly higher than any of the other 3 groups. These subjects also showed the the greatest amount of attitude change, evidence, the authors suggested, that emotional arousal may facilitate changes of this kind.
- 1963 - Berlyne found that heightened arousal increases duration of exploration in a visual-motor task, and that the subject keeps the arousal level as low as possible. However, Berlyne adds, if the individual is healthy and awake, his 'low' is quite high. If his arousal level is exceptionally high, stimuli with high arousal potential will be shunned. The curiosity drive seems to manifest itself until uncertainty is reduced.
- 1966 - Zubek and MacNeill measured the effects of restricted motor activity, of a week's duration, on electric activity of the brain and varied measures of intelligence and perceptual-motor processes. Results were:
- 1) Post-immobilization slowing of occipital EEG activity.
 - 2) Behavioral deficits were found
 - 3) No intellectual measures were affected.
 - 4) Visual vigilance performance was better after the week.
 - 5) Auditory vigilance performance was worse.

Most of the effects could be attributed to the recumbent position. Only body-image disturbances and boredom were associated with immobilization alone.

Zubek and MacNeill felt that these findings indicate that a reduction in the

level of kinesthetic and proprioceptive stimuli via immobilization of the body can produce behavioral and physiological changes similar to those occurring after prolonged sensory and perceptual deprivation. Differences, they felt, which occur, lie largely in the magnitude of the effects.

1966 - Crooks and McNulty subjected 30 male college students to three successive stress conditions. A number of physiological measures were recorded. The results supported Lacey's principle of 'relative response specificity'...Maximum activation occurs in some physiological functions whatever the stress.

30 hospitalized male schizophrenics were studied and these results . . . too, were supportive. The fundamental difference between normal and schizophrenics lay in the elevated level of somatic activity found in schizophrenics. A significant difference between the 2 groups was found in most physiological measures under all conditions of stress. It was hypothesized that some central regulating mechanism which effectively controls physiological reactivity may be defective in the schizophrenic group.

1969 - Zubek and MacNeill, in a study with visually deprived rats and sighted controls in an impoverished environment found that animals reared in an enriched environment appear to possess a heavier sensory cortex than those reared in an impoverished environment.

Canadian Journal of Behavioral Science 1969 (first volume)

Coons and Annis examined the widespread belief that tranquillizing medicine renders individuals more receptive to ego-threatening stimuli. Mental hospital patients were given chlorpromazine. The hypothesis was that they would show greater decrease in defensive responses than

1) patients with no drug or 2) patients on a placebo. The results failed to support this hypothesis. The tranquilized patients were more defensive. The authors drew attention to the implications for the social re-education of patients.

Payne and Allen, working with newly admitted psychiatric patients who showed overinclusive thinking on the Payne Objective Classification Test, found that these people don't develop "Einstellung" rigidity. Rather, they produce an unusually flexible range of responses.

The continuum along which the research ranges embraces animals at one end and highly developed but highly confused schizophrenics at the other end. But is there such a wide gap between these two extremes? Recent evidence indicates that a faulty regulating mechanism is at the basis of the disorder we label schizophrenia. Strictly controlled studies in the animal laboratories may be the most humane way we can study the problem.

Dr. Abram Hoffer, using a biochemical approach to this very human disorder has successfully treated schizophrenics over the last 10 to 12 years. Very little is heard about this work. Perhaps man chooses to be highly complex and is insulted at the idea that a simple vitamin supplement may cure his complicated thought disorders. Whatever the reason, Dr. Hoffer has received nowhere near the acclaim his research indicates is his due. He doesn't stop with the administration of megavitamin supplements. The patients are assisted with therapy which helps them regain control of their lives. Those who dismiss him do so through ignorance. A careful study of his work reveals that this man's results cannot be ignored.

Another leader in this field is presently being ignored in Alberta. Dr. Dabrowski, a Polish psychiatrist, is one of the few (if there are any other) psychiatrists subjecting his own theory, that of Positive Disintegration, to

strict empirical research and control. Until he was the recipient of a Canada Council Research Grant in 1969, he was a 'persona non grata' in the U. of A. Psychology department. Because 'money talks', his position has changed considerably since then.

Dr. Dabrowski feels that emotions play a vital part in the psychic life of man. Emotions resulting from experience, he feels, are the basis of rational thought in man. Man is as human as he is emotional. He is not arguing for a free display of primitive emotions, but a balanced interaction of emotion and reason, neither one in total control, but neither one totally excluded in one's actions.

It seems to me that we have long put emotion and reason as opposites on a scale. It also seems that it would be much more sensible to think of the continuum as being feeling - unfeeling, and thinking-unthinking, with these two variables running parallel with, rather than opposed to, one another.

Not only does man experience disequilibrium, so too do disciplines. Theories in physics were rigidly embraced long after they made sense in the light of accruing knowledge, and it took a major shock to reverse the pendulum. This method of advancement seems to be typical of the 'hard sciences'. Unfortunately, the social sciences seem to have patterned themselves after the hard sciences, and we, as individuals, may find ourselves 'flogging a dead horse.' Many a psychologist spends most of his energy carrying around a 'dead theory', energy which would be well spent in pursuing another line of thought. Is it a particularly human quality to adopt such rigid, restricted views? Or is it particularly inhuman? Is it particularly human to try to disintegrate such rigid attitudes? Or is it particularly inhuman? That answer seems to depend on whether you are espousing the view or criticizing it.

The answer always seems to lead to another question.

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