

The salutogenic model as a theory to guide health promotion¹

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SUMMARY

This paper provides a critical look at the challenges facing the field of health promotion. Pointing to the persistence of the disease orientation and the limits of risk factor approaches for conceptualizing and conducting research on health, the salutogenic orientation is

presented as a more viable paradigm for health promotion research and practice. The Sense of Coherence framework is offered as a useful theory for taking a salutogenic approach to health research.

Key words: health promotion; salutogenic model; theory

It is wise to see models, theories, constructs, hypotheses and even ideas as heuristic devices, not as holy truths. The young scientist of today, looking back, tends to be impatient with what was exciting and fruitful to her older colleagues yesterday. She tends to be unaware of the contributions to thinking and research, even the breakthroughs, of work which ultimately had to be built upon, transformed or perhaps discarded, and oblivious to the importance of knowing how the present flows from the past. On the other hand, there are those who remain fixated on the past, finding it difficult to re-examine, revise and move ahead.

To take an example from my own field of research in the stress process: none of our graduate students today is so naive as to think that scores on a list of events *per se* can predict illness with any power. They know that one must distinguish between negative and positive life events, consider whether the events were controllable, explore the coping mechanisms used, and so on.

¹ This paper is based on a presentation at the WHO seminar on 'Theory in Health Promotion: Research and Practice', Copenhagen, 2-4 September 1992.

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Yet, when Hinkle and Wolf's Cornell Laboratory of Social Ecology began developing the idea of 'life events' in the 1950s, and when Holmes and Rahe (1967) later published the SRRS (Social Readjustment Rating Scale), a major step forward had been taken. A similar point can be made with respect to the concept of psychosomatics. In the 1930s it was revolutionary to suggest that something in the mind could lead to somatic diseases. Today, I submit (though many would disagree), we are held back by the concept, because it implies that some diseases are psychosomatic and others are not. It perpetuates dualistic thinking and prevents us from seeing that *all* human distress is always that of an integrated organism, always has a psychic (and a social, I might add) and a somatic aspect.

This point has been made in order to prevent a misunderstanding of the thesis of this paper, which is: *The concept of health promotion, revolutionary in the best sense when first introduced, is in danger of stagnation. This is the case because thinking and research have not been exploited to formulate a theory to guide the field.*

It would not be in place here to review the literature on the concept of health promotion. It is, however, crucial to stress that it presumably proposed a significant addition to, or

modification of, the concept of disease prevention. The latter had itself been a major step forward in its time, in that it exposed the 'bias of the downstream focus', i.e. the devotion of the disease care system to saving swimmers drowning downstream by heroic measures, rather than asking 'Who or what is pushing them into the river in the first place?' On the conceptual level, health promotion is linked to the grand WHO vision of 'Health is a state of optimal physical, mental and social well-being, and not merely the absence of disease and infirmity.' In the field, it is perhaps best located as guiding the spirit of MCH (Maternal and Child Health) centers, viewed as taking on the task not only of immunizing against this or that disease, but of helping babies (and their mothers; fathers, of course, have nothing to do with their children's health) to be happy and healthy.

If only people would engage in practices and behaviors which are health-promotive, the thinking went, there would be an immense decrease in human suffering. Some were even more sanguine, promising an increase in human happiness, as if health were the only aspect of human existence determinant of happiness. A second claim has also been made, particularly recently; a claim which is a spinoff from the claim for disease prevention. The successful promotion of health would have a major economic impact. It would, on the one hand, decrease the need for disease-care expenditures and, on the other hand, allow people to be more economically productive (less absenteeism, greater work efficiency, etc.).

The concept of health promotion is surely attractive and has given birth to some bright ideas. There have also been significant controversies. Thus, for example, the cost-saving claim has hardly been well-documented. People who are healthy presumably are people who will live longer and so, in the long run, might well have more years of economic dependency. My hunch is that one had best make the arguments for health promotion in value rather than in market-oriented terms. No one contends that museums pay off in cash.

A second very serious controversy relates to the observation that health promoters (in this sense no different from disease preventers) have not confronted the question of the creation of appropriate social conditions which underlie or facilitate health-promotive behaviors, e.g. adequate day care facilities and access to health care, not to speak of incomes adequate for decent

nutrition and housing. This debate has often centered around the 'lifestyle' concept. As Green and Kreuter (1990, p. 320) put it: 'As a target for health promotion policy and programs, lifestyle refers, for some, to the consciously chosen, personal behavior of individuals as it may relate to health. Others interpret lifestyle as a composite expression of the social and cultural circumstances that condition and constrain behavior, in addition to the personal decisions . . .' [For the most recent and forthright expression of the latter position, see McKinlay (1993).]

An attractive concept, bright ideas, some of which have worked, and promises of saving which remain undocumented may generate enthusiasm, but cannot become a cumulative basis for understanding which would guide action. Much better, perhaps, to stay with a commitment to disease prevention. At least here there are good theories, a world of empirical knowledge, sophisticated techniques and methodologies, and evidence that many problems can be understood and managed.

One searches in vain through Volume 2, entitled *Processes for Public Health Promotion*, of the *Oxford Textbook of Public Health* (Holland *et al.*, 1985), for a theoretical analysis of health promotion. The very valuable theoretically-oriented chapter by Maddox (1985, pp. 19–31) focuses on 'the modification of social environments', but is consistent with the rest of the book in remaining squarely within the field of disease prevention. Similarly, despite the chapter title and an explicit section called 'The Concept of Health Promotion', Tolsma and Kaplan (1992, p. 703) grant that 'an accepted definition of health promotion has been elusive'. I find little help in their reference to the WHO European Regional Office Ottawa Charter definition: 'Health promotion is the process of enabling people to increase control over, and to improve, their health.' Their own emphasis, in quoting the justly famous 1974 Canadian Lalonde Report and the 1979 *Healthy People*, the US Surgeon General's Report on Health Promotion and Disease Prevention, is on 'community and individual measures which can help [people] to develop lifestyles that can maintain and enhance the state of well-being'. This too is the thrust of Green and Kreuter's (1990) important paper on health promotion.

When we look closely at the concept of 'lifestyles' as it appears in the literature, however, what is found is a list of (generally well-documented) risk factors: smoking, other substance abuse, overnutrition, drunken driving,

unsafe sex, exposure to injuries. We remain squarely in the realm of disease prevention, though not quite in the age of Snow's Broad Street pump. Snow was concerned with cholera; many immunization programs are likewise disease-specific. The lifestyle concept, however, is somewhat more broadbanded, in that the identified risk factors are often precursors to a variety of diseases. It does not, however, even go as far as the concept of breakdown, a proposal I advanced over two decades ago (Antonovsky, 1972), a proposal grounded in dis-ease (note the hyphen) prevention thinking.

Once again, I emphasize that I am being critical of a field in which exciting and important work has been done but one which is in danger of unfulfilled promise because it lacks a theoretical foundation. Snow's contribution was important; but Pasteur's was far greater. It is, then, my goal here to propose such a foundation, in terms of what I call the salutogenic model. It is, however, *not* a theory which focuses on 'keeping people "well"'. Rather, in that it derives from studying the strengths and the weaknesses of promotive, preventive, curative and rehabilitative ideas and practices, it is a theory of the health of that complex system, the human being.

A SALUTOGENIC ORIENTATION

My point of departure is to focus attention on a paradigmatic axiom shared by the proponents of curative medicine (downstream) and disease-preventive (upstream) efforts alike. The axiom is one which is at the basis of the *pathogenic* orientation which suffuses all western medical thinking: the human organism is a splendid system, a marvel of mechanical organization, which is now and then attacked by a pathogen and damaged, acutely or chronically or fatally. Multiple causation theory and the biopsychosocial model do not dispute this axiom. Nor do those who have introduced the concept of lifestyle, whether of the 'blaming the victim' school or those who emphasize how social conditions structure lifestyles.

Proponents of health promotion, I suggest, have suffered a failure of nerve, in that, unable to confront this axiom squarely, they have been held back from theoretical progress. At least implicitly sharing this axiom, they too inevitably fall prey to what I submit is the basic weakness of the currently dominant paradigm which follows from this axiom: the dichotomous classification of persons into those who have succumbed, tempo-

rarily, permanently or fatally to some disease (subdivided via the *International Classification of Diseases—III—R*) and the residual category (presumably a large majority of at least Western populations), those who are safely on shore. Curative medicine, to return to my metaphor, is devoted to those who are drowning; preventive medicine, to those in danger of being pushed into the river upstream. What of health promotion?

It is no wonder, then, that the advocates of health promotion as a field have succumbed to the powerful but unfortunate flaw which flows from the dichotomous classification: the all-consuming concern with risk factors, with pathogens. If one is 'naturally' healthy, then all one has to do to stay that way is reduce the risk factors as much as possible. Or, as I much prefer, all that social institutions have to make sure of is that those risk factors which can be reduced or done away with at the level of social action are handled, and that social conditions allow, facilitate and encourage individuals to engage in wise, low risk behavior.

As Thomas Kuhn pointed out, paradigmatic axioms begin to crumble when uncomfortable datum after datum piles up. All one has to do is to read the *New York Times* (I write this in the United States) every day for a period of several months to encounter the prevalence data for this or that disease in the United States (and presumably in any other Western country) and add things up. Notwithstanding the tendency of those with vested interests to exaggerate the numbers who suffer from 'their' disease, and the fact of persons with multiple pathologies, none the less one must begin to question the axiom. Or, if one has a pessimistic (some would say realistic) philosophical bent, one sees the power of Murphy's Law. Or, attuned to the latest developments in the sciences, one is confronted by the most compelling question, the miracle of 'order out of chaos'.

Aware of these data, and influenced by the concept of inevitable pressures toward entropy even in open systems, I was led to propose the conceptual neologism of *salutogenesis*—the origins of health—(Antonovsky, 1979). I urged that this orientation would prove to be more powerful a guide for research and practice than the pathogenic orientation. If we start from the assumption that the human system (as all living systems) is *inherently* flawed, subject to unavoidable entropic processes and unavoidable final death, what follows is a set of ideas which can provide a theoretical basis highly congenial to the proponents of health promotion, allowing it truly

to carve out an autonomous existence—though one undoubtedly in partnership with curative and preventive medicine.

If indeed each of us, by virtue of being a living system, is in the river, and none are on the shore, it follows that a dichotomous classification—well/diseased or health/illness, as some would have it to take account of ‘subjective’ self-assessment—is inappropriate. A continuum model, which sees each of us, at a given point in time, somewhere along a ‘healthy/dis-ease continuum’ is, I believe, a more powerful and more accurate conception of reality, one which opens the way for a strong theory of health promotion. [I am fully aware of the great difficulty in operationalizing a health/dis-ease continuum. To discuss the matter here would be impossible. For a recent brief but fine review of the problem, see Patrick and Bergner (1990).] To remain with the metaphor: we are all, always, in the dangerous river of life. The twin question is: How dangerous is *our* river? How well can we swim?

Having put it this way, we can move to the second weakness I have noted: the concentration on risk factors. Posing the salutogenic question, namely, ‘How can we understand movement of people in the direction of the health end of the continuum?’—note, *all* people, wherever they are at any given time, from the terminal patient to the vigorous adolescent—we cannot be content with an answer limited to ‘by being low on risk factors’. To answer the question requires another neologism: **salutary** factors. I would not quarrel with ‘health-promoting’ factors or any other term, as long as the concept is clear: factors which are negentropic, actively promote health, rather than just being low on risk factors.

A salutogenic orientation, then, as the basis for health promotion, directs both research and action efforts to encompass *all* persons, wherever they are on the continuum, and to focus on salutary factors. There is, however, a third significant implication of adopting such an orientation. The pathogenic orientation of those engaged in preventive medicine actions leads them to focus on a particular diagnostic category—if primary prevention, e.g. high-risk-for-diabetes-persons; if secondary prevention, diabetics—and to concentrate on minimizing the risk factors for becoming diabetic/getting worse. The specialization of curative medicine is even more notorious. By contrast, those engaged in health promotion, adopting a salutogenic orientation, might work with a ‘community’ of persons who are middle-

aged, white-collar, married women, etc., etc. who also are characterized by being high on a number of risk factors for diabetes, or who have been diagnosed as having diabetes. The difference in phrasing is all-important! In the former case, one is running a program to prevent non-diabetics from becoming diabetics, or diabetics from getting worse from diabetes. No matter that they die of heart attacks or are killed in traffic accidents, not to speak of disregarding any overall move toward health. That’s not the job of our outfit. The person is identified with the disease, which becomes the sole focus of attention.

The issue has a moral face. It is, I believe, impermissible to identify a rich, complex human being with a particular pathology, disability or characteristic. I submit that, working with a pathogenic orientation, one is pushed in this direction, pressured to forget the complexity. (Such obliviousness is, of course, appropriate in the treatment of severe bleeding, cardiac resuscitation, and all the other TV dramas which, important as they are, have little to do with the realities of most chronic illness.) The provider of care must indeed be highly empathetic and sensitive to withstand the pressure to forget the human being who has the disease. The health promoter, irrespective of her personal bent, is pressured to be concerned with the person.

The issue, however, is not only moral. It is also scientific. The identification of human complexity with one-faceted particularity is simply poor care. A salutogenic orientation, which does not in the least disregard the fact that a person has been diagnosed as having diabetes or is at high risk for breast cancer or shows signs of depression or has been given 2 weeks to live as a ‘terminal cancer patient’, of necessity, in asking, ‘How can this person be helped to move toward greater health?’ must relate to all aspects of the person.

A salutogenic orientation, I wrote, provides the *basis*, the springboard, for the development of a theory which can be exploited by the field of health promotion. I do not wish to claim that there is a *tabula rasa* because we have not asked the salutogenic question. Indeed, there are a fair number of ideas around, including the no-longer magic bullet of ‘social supports’. The problem, however, is that bright ideas, as long as they are unintegrated into a theory, and certainly as long as they are untested, are not very helpful. More significantly, a good theory will give birth to productive ideas. Which brings us to the sense of coherence.

THE SENSE OF COHERENCE³

The 'bright ideas' which initiated my search for a theoretical answer to the question 'What explains movement toward the health pole of the health ease/dis-ease continuum?' were what I called 'generalized resistance resources' (GRRs). This referred to a property of a person, a collective or a situation which, as evidence or logic has indicated, facilitated successful coping with the inherent stressors of human existence. My own work on social class, poverty and health provided a major input (except that now I asked about moving toward health and not towards disease), as did our study on cultural stability and the coping by women of different ethnic groups with the stressors of menopause (Datan *et al.*, 1981).

The decisive step forward, however, in formulating a theory was taken when I began to ask what do all these GRRs have in common, why do they seem to work. What united them, it seemed to me, was that they all fostered repeated life experiences which, to put it at its simplest, helped one to see the world as 'making sense', cognitively, instrumentally and emotionally. Or, to put it in information-systems theory terms, the stimuli bombarding one from the inner and outer environments were perceived as information rather than as noise. These strands of thought led to the emergence of the sense of coherence (SOC) construct, a generalized orientation toward the world which perceives it, on a continuum, as comprehensible, manageable and meaningful. The strength of one's SOC, I proposed, was a significant factor in facilitating the movement toward health.

Confronted with a stressor, the person (or collective; but this is another problem too complex to discuss here, though it is of decisive import) with a strong SOC will:

- wish to, be motivated to, cope (meaningfulness);
- believe that the challenge is understood (comprehensibility);
- believe that resources to cope are available (manageability).

These components will sound familiar to those who know the coping literature, for they are close

³ Since much has been written about the sense of coherence, this section will be brief. Readers are referred to Antonovsky (1987), which contains the fullest statement of the salutogenic model.

to concepts like optimism, will to live, self-efficacy, learned resourcefulness, hardiness, etc. But it is the particular combination of the cognitive, behavioral and motivational which is unique. Moreover, unlike concepts such as internal locus of control, mastery, empowerment, problem-solving coping, etc., the SOC is not a culture-bound construct. *What* gives one a sense of meaningfulness; *which* type or style of resource one thinks is appropriate to apply to a given problem; *in whose hands* the resources are, as long as they are in the hands of someone 'on my side' (e.g. God, a friend); *how much* information one thinks one needs to comprehend—the *substantive* answers to these questions may vary greatly from culture to culture, from situation to situation. What matters is that one has had the life experiences which lead to a strong SOC; this, in turn, allows one to 'reach out', in any given situation, and apply the resources appropriate to that stressor. (Of course there can be mistakes and failures; but the person with a strong SOC learns from these, and is not doomed to repeat them.)

If my hypothesis that the SOC is decisive in facilitating movement toward health is correct, an issue to which I shall soon return, the implication is that it may provide a powerful, comprehensive and systematic theoretical guide for research, and ultimately for action, in the promotion of health. The SOC, then, in turn would become a *dependent* variable, to be shaped and manipulated so that it in turn can push people toward health.

At this point it is essential that I make my position clear. I do not wish to commit what I regard as the profound error, noted above, of some of those who deal with the lifestyle concept, and say: If you are persuaded that I am right, then decide to have a strong SOC! The strength of one's SOC is shaped by three kinds of life experiences: consistency, underload–overload balance, and participation in socially valued decision-making. The extent of such experiences is molded by one's position in the social structure and by one's culture—above all, I am persuaded, by the kind of work (including housework) one does and by one's family structure, with input from many other factors, ranging from gender and ethnicity to chance and genetics.

Having said this, I would none the less emphasize that people are, within limits, proactive and have some choice in life; and, further, that social institutions in all but the most chaotic historical situations can be modified to some degree. In order not to be too abstract, I refer to

such things as taking part in the organization of a trade union to fight for job security or a political struggle to have paid job training for women who have been divorced; participation in a serious therapy group; changing (or even making) some commitment in affiliation or activity. These will not radically transform anyone's SOC. What they can do is prevent damage, perhaps add a little strength and, in some cases, create an opening for the beginning of a major change in life circumstances.

TESTING THE SOC HYPOTHESIS

I have, then, suggested that adoption of a salutogenic orientation in and of itself would be a valuable foundation for those engaged in health promotion, working with anyone at any point on the health-illness continuum. But can one go beyond the exploitation of what many have seen as an intuitively appealing idea and see the SOC as a theoretical basis for health promotion? Can it be contended that strengthening the SOC of people would be a major contributor to their move toward health?

As persuasive as the hypothesis might sound, a measurement tool had to be developed to allow it to be tested empirically. Given the fact that my own experience has been in survey research, my attention was devoted to creating a closed scale to measure the SOC. In the volume which presents the fuller version of the salutogenic model (Antonovsky, 1987), a 29-item SOC 'Orientation to Life' scale is given, together with the story of its development and scoring instructions. Having been placed in the public domain, the scale has by now been used by scores of researchers in some 20 countries and has been translated into 15 languages.

Two conclusions can be reached at least tentatively at present. These can only be stated here briefly, and are documented in a recent paper (Antonovsky, 1993) which is based largely on published journal articles and, secondarily, on data from dissertations and theses. First, there is little doubt that the 29-item SOC scale (and, to a slightly lesser degree, its 13-item version) has been found to be consistently feasible, reliable and valid. This is true across cultures, social classes and ethnic groups, and for men and women of all ages (and even for adolescents). A word of caution must be noted. Thus far the scale has not been used in non-Western cultures.

Second, the preponderance of the extant evidence is at least consistent with the SOC → health hypothesis. The correlations with a wide variety of measures of wellbeing and health on the one hand, and distress and maladaptation on the other, are consistently strong. Very few of the studies, however, are longitudinal and hence nothing can be said about evidence in favor of causality. It should also be noted that reference here is to *one* type of measure of a complex construct.

In short, at the present time, the appeal of the full salutogenic model for those engaged in health promotion cannot be on the grounds of powerfully demonstrated efficacy in producing significant health-related change outcomes. As noted above, however, there is no other theoretical model which even claims to provide a potential basis for health promotion. The choice is to do nothing, to continue to work with bright ideas (which tend to merge with preventive medicine and, more often than not, focus on a particular risk factor and particular disease), or to structure a program which is based on the intellectually systematic organizing framework question: *What can be done in this 'community'—factory, geographic community, age or ethnic or gender group, chronic or even acute hospital population, those who suffer from a particular disability, etc.—to strengthen the sense of comprehensibility, manageability and meaningfulness of the persons who constitute it?*

THE SALUTOGENIC MODEL, RESEARCH AND ACTION

As a researcher, my own bent is to stress the need for further empirical testing of the hypothesis. There is a wide variety of questions to be clarified, above all that of causality. Among the questions which have been raised by findings in ongoing studies relating to the SOC as an 'independent' variable are:

- Does the SOC act primarily as a buffer, being particularly important for those at higher stressor levels, or is it of importance straight down the line?
- Is there a linear relationship between SOC and health, or is having a particularly weak (or a particularly strong) SOC what matters?
- Does the significance of the SOC vary with age, e.g. by the time the ranks have been thinned,

and those who survive generally have a relatively strong SOC, does it still matter much?

- Is there a stronger and more direct relationship between the SOC and emotional wellbeing than with physical wellbeing?
- What is the relationship between the movement of the person toward wellbeing and the strength of his/her collective SOC?
- Does the SOC work through attitude and behavior change, the emotional level, or perhaps, as suggested by the fascinating new field of PNI (psychoneuroimmunology), from central nervous system to natural killer cells?

My own particular program of research is focused on the long-range, underlying historical, cultural and social structural developmental roots of the SOC. At the same time, by maintaining a network of contacts among a wide variety of researchers, working in different countries (from the Czech Republic to California, from Finland to South Africa to Australia) and in different areas (from children with developmental disabilities to persons undergoing cardiac rehabilitation to farmers in drought areas to chronic pain patients), I can gain a more profound understanding of the problems and promises, at a theoretical level, of the salutogenic model.

For those engaged in health promotion, research to obtain the answers to such questions is essential if the salutogenic model is to gain ascendancy in guiding their work. But such research is the primary responsibility of others. Of more direct concern is the systematic development of programs, guided by the SOC construct, designed to strengthen the sense of comprehensibility, manageability and/or meaningfulness of a given population. Or, I might note, with particular reference to institutionalized populations, programs modestly aimed at preventing the damage very often done to the SOC of residents. The emphasis, then, would be on treating the SOC as a 'dependent' (or intervening) variable. Such programs must, of course, always have a built-in research evaluation component, this being aimed not only at the usual 'Is it effective and is it efficient?' criteria, but research which would feed back into theoretical advance.

It would be presumptuous to propose specific programs. These would have to be designed by persons who, though informed by a salutogenic orientation, are experts in a particular field. From my own interactions with a wide variety of such experts in workshops conducted in a number of

countries (e.g. hospital nutritionists, family therapists, developmental disability experts), I have found both enthusiasm and the generation of systematic programmatic proposals, once the model is understood, with far more competence than I could possibly show.

None the less, it might be helpful to refer to a concrete program to illustrate how the salutogenic model might be applied in action research. Clarke *et al.* (1992) report a well-designed control study aimed at studying 'the effect of social intervention [on health and wellbeing] over 3 years among elderly people, aged 75 and above, living alone' (p. 1517) in a British general practice list of about 32 000 patients. After obtaining baseline data, respondents were randomly divided into experimental and control groups. A caseworker was then assigned to the 261 persons in the former, with an offer of 'social intervention'. 'The type of assistance given varied but was tailored to each person's request for help' (p. 1519).

The introduction and literature review part of the paper explicitly state that the intervention was guided by the concept of social support. It was assumed that a core problem of elderly persons living alone was social isolation, both as an emotional and as a pragmatic problem. The intervention, then, fell into five main categories: social services, financial, housing, nursing and medical. The reasonable hypothesis was that by meeting the needs that were identified by respondents, both emotional and pragmatic problems could at least be eased.

This applied research study is, I believe, a modest example of the most competent work in health promotion. For present purposes, its findings are beside the point, with one exception. Despite offers of 'individual packages of support that aimed at enhanced social contacts . . . half the elderly in this sample declined several offers of help' (p. 1517). Had the authors been guided by the SOC construct, asking 'How can the case workers strengthen the comprehensibility, manageability and meaningfulness of respondents?' the program might have been far richer and sophisticated. Further, the findings would have made a more significant contribution to theory.

The assumption of the authors was that these elderly people needed social contacts and had particular pragmatic needs. Of course this is true on the common-sense level; or at least it was true for half the people. And the others? Perhaps their

need is to proudly maintain their *refusal* to acknowledge to a case worker that they are welfare cases, needing assistance from the authorities? Or perhaps to give rather than to get, to be recognized as productive and needed by the society, rather than being treated at best as furniture to be taken care of? Or perhaps to be reconciled with their children or grandchildren? Or perhaps to change their GP to one with whom they can communicate better?

Lest I be misunderstood, I would emphasize that these 'needs' are not bright ideas. They are examples of ideas which flow from a translation of the components of the SOC to the concrete situation. I venture to say that had the research started with the use of the SOC questionnaire and been followed by a tailored program aimed at strengthening each of the three components, one could have learned much more from the study. The health outcomes might or might not have been different from that which was found (the only change was a questionable improvement in perceived health). But it would have been a study suggesting, for example, that the key to health promotion is motivational (meaningfulness) rather than cognitive (comprehensibility), or the reverse, or that both are equally important, a finding that allows cumulative progress.

I trust that my thesis has been clear. With great respect for the concept of health promotion (and for those committed to it), I have none the less been highly critical, in emphasizing that the basic flaw of the field is that it has no theory. The salutogenic orientation has been proposed as providing a direction and focus, allowing the field to be committed to concern with the entire spectrum of health ease/dis-ease, to focus on salutary rather than risk factors, and always to see the entire person (or collective) rather than the disease (or disease rate) and the collaborator. Further, the sense of coherence construct (and one methodo-

logically respectable way to operationalize it) has been discussed as a comprehensive source and guide for research and action in health promotion. The salutogenic model, I believe, is useful for all fields of health care. In its very spirit, however, it is particularly appropriate to health promotion.

REFERENCES

- Antonovsky, A. (1972) Breakdown: a needed fourth step in the armamentarium of modern medicine. *Social Science and Medicine*, **6**, 537-544.
- Antonovsky, A. (1979) *Health, Stress and Coping*. Jossey-Bass, San Francisco.
- Antonovsky, A. (1987) *Unraveling the Mystery of Health*. Jossey-Bass, San Francisco.
- Antonovsky, A. (1993) The structure and properties of the sense of coherence scale. *Social Science and Medicine*, **36**.
- Clarke, M., Clarke, S. J. and Jagger, C. (1992) Social intervention and the elderly: a randomized control trial. *American Journal of Epidemiology*, **136**, 1517-1523.
- Datan, N., Antonovsky, A. and Maoz, B. (1981) *A Time to Reap: The Middle Age of Women in Five Israeli Subcultures*. Johns Hopkins, Baltimore, MD.
- Green, L. W. and Kreuter, M. W. (1990) Health promotion as a public health strategy for the 1990s. *Annual Review of Public Health*, **11**, 319-334.
- Holland, W. W., Detels, R. and Knox, G. (eds) (1985) *Oxford Textbook of Public Health, vol. 2, Processes for Public Health Promotion*. Oxford University Press, Oxford.
- Holmes, T. and Rahe, R. (1967) The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, **11**, 213-218.
- Maddox, G. L. (1985) Modifying the social environment. In Holland, W. W., Detels, R. and Knox, G. (eds) *Oxford Textbook of Public Health, vol. 2, Processes for Public Health Promotion*. Oxford University Press, Oxford, pp. 19-31.
- McKinlay, J. B. (1993) The promotion of health through planned sociopolitical change: challenges for research and policy. *Social Science and Medicine*, **36**, 109-117.
- Patrick, D. L. and Bergner, M. (1990) Measurement of health status in the 1990s. *Annual Review of Public Health*, **11**, 165-183.
- Tolsma, D. D. and Kaplan, J. P. (1992) Health behaviors and health promotion. In Last, J. M. and Wallace, R. B. (eds) *Maxcy-Rosenau-Last Public Health and Preventive Medicine*, 13th edn. Appleton & Lange, Norwalk, CO.