1 The systems approach

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Interest in the application of systems theory to social work gathered momentum in the late 1950s and 1960s (e. g. Buckley 1967, Hearn 1968) and reached its height with the publication of major American texts by Howard Goldstein and Pincus and Minahan in 1973. These and other texts that proclaimed a 'unitary' perspective were used widely on social work training courses in the UK during the 1970s and beyond together with the important 'bridging' text of Specht and Vickery, *Integrating Social Work Methods* (1977).

When first introduced, the systems approach was regarded not just as a conceptual framework, but also as a symbol of unification that would promote the incipient power and influence of the social work profession. Here it needs to be noted that the approach was introduced at an early stage of development of the new monolithic social services departments and of 'integrated' social work training (i. e. CQSW) courses. These developments required some common, unifying principles to underpin the methods of service delivery of the new 'generic' social workers. Such principles were articulated in a variety of publications on unitary approaches. Not all unitary perspectives used systems theory for underpinning, however, and certainly there has never been any wholesale and uncritical adoption by social work training of either a systems or a unitary approach.

The other pressure for integration, which the systems approach was expected to assist, was of the methods and techniques at the disposal of social workers, notably casework, groupwork and community work, and arguably residential work (Payne 1977). The approach provided a means by which a wide range of interventive methods, including some based on opposing treatment ideologies and theories such as behavioural and psychodynamic methods, could be differentially and acceptably employed within a comprehensive unitary model of social work.

In brief, systems theory historically has made three major contributions to social work developments.

1 To provide the basis for a unified profession of social work; this has certainly not been achieved.
2 To provide an overarching and permeating theory for social work practice. This, as we will see, has been problematical to say the least.
3 To assist with the integration of the different traditions and methods that have characterized social work, i. e. casework, group work, residential work and community work; and of the different academic disciplines that inform social work, i. e. sociology, psychology, social policy, etc. How effective this has been is also difficult to evaluate.

The history is important because the systems approach has now lost much of its potency to stimulate debate and controversy and little of substance has been written on it over the past few years. It may still be referred to and used in social work training and practice; for example, implicitly in relation to the community social work approach (Smale *et al*. 1988) and explicitly in some forms of family therapy (e. g. Minuchin 1974). There is an excellent systems analysis of residential practice by Atherton (1989). Systems concepts are also implicit in 'ecological' and 'social networking' models (e. g. Davies 1977, Whittaker and Garbarino 1983). However, it would seem that social work has to a large extent lost its taste for 'grand theory', which the approach represented, and for the political interventions and confrontational style which were seen to follow from a systems analysis of social needs and problems.

During the 1970s the systems approach provoked quite passionate debates between its proponents and antagonists. For example, one critical article by Bill Jordan, which appeared in *New Society* in 1977, provoked such a furore that a special correspondence page had to be given over to the responses. The approach was criticized by Marxists because it appeared too conservative and offered little analysis of the structural causes of personal distress and difficulty. It was criticized by traditionalists because it allegedly took social work away from its roots of helping individuals and made social work an impersonal and bureaucratized set of activities. Alternatively it could be criticized because it potentially took social workers into the political arena and into confrontations with, for example, the employing agencies.

Some criticisms of the approach were based on a misunderstanding of the role of systems theory, which was less that of a comprehensive 'grand theory' of society on a par with, say, Marxism, than that of a 'meta theory' that could help social workers organize and integrate different perspectives and methods for achieving relatively small-scale personal and social changes.

There are several possible explanations as to why the systems approach is today deemed less fashionable and tendentious. First, in recent years, as a response to criticisms of so-called 'generic work', and coining mainly as a

result of the series of child abuse scandals and inquiries, there has been a growing trend to return to specialization by client group. With the implementation of the 1989 Children Act and 1990 NHS Community Care Act with its 'purchasing/providing' divisions, specialization is likely to increase further. These trends towards greater specialization are correspondingly reflected in the changes to qualifying social work training and the new Diploma in Social Work regulations. They do not, it should be stated, invalidate the systems approach, but may make it more difficult to apply.

The application of a unitary model has also been affected by other factors: ideological pressure from the Right to reduce 'welfarism'; changes in legislation and procedures, particularly in relation to child protection, which have increased the social policing role of the social worker; and resource constraints and other financial pressures on the main employers of social workers, the local authorities, which have resulted in an erosion of the 'resource systems' available to social workers. The scenario of the 1990s is one of mainstream social work becoming, if anything, more conservative, procedural and managerial, in effect returning to its historical role of helping individuals as opposed to achieving radical social change through systemic action. In *The Essential Social Worker* Davies perhaps represents most clearly what social work has in fact become, when he argues that the main function of social work is not the achievement of large-scale social change, which is implicit in some unitary approaches. Its role is rather that of *maintenance*. 'Social workers are the maintenance mechanics oiling the interpersonal wheels of the community' (Davies 1981:137).

Given the current state of social work, a renewal of interest in the systems approach could be no bad thing. I state this because the profession appears to have become sadly fragmented and to have lost its vision of the kind of society that would seem to follow from the articulation and application of its values. It is true that there is currently a great deal of 'issue-raising' about equal opportunities, anti-oppressive and anti-discriminatory practice, but few well thought out strategies to realize these goals. The systems approach does not have all the solutions here, but it does have the merit of offering a way of analysing and thinking through these issues and identifying appropriate strategies for action.

The systems approach also acts as a conceptual framework, which can reduce theoretical fragmentation. For example in a recent study of student placement records covering nine CQSW courses, it was stated there 'was no evidence at all of the consistent or systematic application of a particular framework, approach or theory. Where theorising did appear to be taking place it was on a piecemeal basis with no overall strategy or tactic discernible' (Thompson 1991).

THE SYSTEMS APPROACH

For a much fuller description and critique than can be offered here, the reader is referred to M.Payne (1991). Here we provide a simple guide for getting to grips with a fairly complicated set of ideas (which could also explain its unpopularity!).

The basis of the systems approach and its understanding lies in social systems theory. Thus to start with we need a definition of a social system. Buckley's is generally considered to be helpful:

> A complex of elements or components directly or indirectly related in a causal network, such that each component is related to at least some others in a more or less stable way within a particular period of time.
>
> (Buckley 1967:41)

This definition can thus be used in relation to:

- human beings as biological and psychological systems;
- simple social relationships, e. g. couples whose actions and behaviour will invariably need to be explained in relation to one another: *A*'s behaviour towards *B* being determined by *B*'s behaviour towards *A* through their continuing interaction. Thus an explanation of the behaviour of one cannot be made without reference to the other, not as separate individuals, but taken together as an entity. A 'symbiotic relationship', for example, is one that can only be explained systemically;
- nuclear and extended families and kinship networks;
- neighbourhoods and social networks, organizations and associations of different sorts, e. g. community groups, political parties, Round Table, etc.
- work organizations, local authorities, voluntary agencies, etc.
- the civil service, the government, the world, the universe, etc.

The assumption made in describing any social organization as a 'system' is that behaviour, events and social processes cannot be fully understood in isolation, but only in relation to one another. Systemic influences may be direct and indirect; connections may not be obvious but could arguably be identified from research and analysis. For example the composition and culture of, say, a particular middle-class residential neighbourhood, is clearly not created from 'individual choice' alone. It will be influenced, for example, by the range and style of houses, and the planning processes that have been employed, which will determine their price and therefore who can afford to live there. Some income groups (and social classes) will therefore b   e excluded from taking up residence there. Many of the influences on people's lives are covert or indirect, such as the economic

and political, but when analysed systemically can be identified and weighed up accordingly.

The emphasis in systems theory on interactions, transactions, context, interrelatedness, and the idea that the sum total is greater than the individual parts certainly shifts attention away from 'disease' and 'pathological' theories of behaviour towards multi-causal, interactional explanations (Triseliotis 1978). Social systems theory is itself a progression from *general systems theory* postulating that all phenomena or events—physical, chemical, biological or social—should be conceptualized as organized wholes or entities, where the components are functionally interrelated as subsystems. Each system is thus interconnected with others occurring in its total environment (von Bertalanffy *et al*. 1951).

General systems are of four main types:

1 *Natural* systems such as the universe or solar system; life systems in terms of their anatomy, physiology, biology and ecology.
2 *Physical design* systems, e. g. engineering, central heating, gas distribution, motor car engine systems.
3 *Abstract design* systems such as mathematical and computer language systems.
4 *Human activity* systems, i. e. social organizations like families and the Girl Guides.

One of the problems for social work is the limitations of theories about social systems, which are not as advanced as in other disciplines, engineering for example. Systems can be thought of as being 'hard' or 'soft'. Analysis of a fault occurring in a 'hard' system, for example a motor car engine, can be undertaken systematically on the assumption that sooner or later it will be located and diagnosed. This is because there is a body of knowledge to explain the working of the whole system and its parts. Social systems are problematical because there is rarely the same kind of 'hard' knowledge—such is the status of the social compared to the natural sciences—to account for their operations. Consequently there must inevitably be more recourse to conjecture and speculation about individual situations, and evidence collection and appraisal on which to base an assessment is made much more difficult. Triseliotis (1978), for example, has criticized the application of systems theory to social work for being too vague and generalized and of little practical value, because it is impossible to predict from it what is likely to have occurred or will happen in specific instances.

Where attempts are made to describe social systems as if they are capable of being 'hard', criticism is then levelled that the model of society is overly mechanistic and reductionist. One of the common criticisms of the systems approach from the Left has always been that it assumes a static, Parsonian

model of social structure and process, in which society is regarded more as a closed than an open system. This is not a valid criticism of systems theory as such, but only of a particular interpretation of it, the structural-functionalist approach. It is based on a partial understanding of types of systems, which are more likely within the concept of general systems to be characterized by fluidity, flexibility and potential for change on many levels.

Indeed, one of the problems of the systems approach is that almost anything can be defined as a system to the point where it becomes meaningless to do so. For example, it is pointless to use the concepts of 'change agent', 'client', 'target' and 'action' *systems* as in the Pincus and Minahan model (the best known of the unitary approaches), unless systems features and processes are actually understood and used to make social work assessments and to identify the interventions that should logically follow. My reading of many students' essays and assignments over the years suggests that what has often been missing has been a good grasp of 'systems thinking' and its practical implications; all that is learned is a facile relabelling of more traditional approaches and a continuation of existing styles of working.

Thinking 'systemically' means that many influences that are not obviously included in an assessment of a 'problem' will be so. For example, if we were to examine the performance of a social work team, one approach would be to assess the performance of individual team members solely in relation to their job descriptions and other formal organizational expectations. A team viewed as a social system, as an entity whose components interrelate, will suggest a different assessment approach. Here we would need to explore how the variables associated with roles, power and influence, team values and culture, gender and race, amongst others, all interact and contribute to how the team is operating as a *whole* and *then* look at the effects on individual members. The interconnectedness of the different 'subsystems' will be demonstrated when, for example, the power of some individual team members will be identified as a source of stress for others. This in turn may create conflict and unhealthy tensions in working relationships and erode the team's accepted value base. Once the analysis has been completed in systems terms, the appropriate actions may follow. For example, the team might decide to review its values and goals, from which new or modified plans of action are identified that begin to address the imbalances that have been identified in working relationships (see also Douglas and Payne 1989).

However, thinking systemically may give the feeling of operating on shifting sands. This is partly because the definition of a 'social system', i. e. in terms of its purpose, structure, boundaries, processes and so on, will vary according to the *perspective* from which it is defined. A 'helping system', for example, may be defined differently for a field social worker than for a residential worker or foster parent, despite the fact that they all share a common

concern—a child or children in care. One might assume that all have a common purpose—the welfare and interests of the child. However, the perspective of the field social worker may well conflict with those of the residential worker or foster parents, and where they do, difficulties in identifying and therefore achieving goals can easily be predicted. Work has to be done, therefore, between those involved to create *common* definitions of the goals and tasks so that a *common* perspective is being followed and all recognize that they are operating within *common* (system) boundaries.

KEY CONCEPTS OF SYSTEMS THEORY

There are a limited number of key concepts that have to be grasped, without which it is impossible to apply any model of practice founded on a systems theory, including, for example, certain family therapy approaches. I shall describe these as simply as I can.

Basic characteristics

All systems, by definition, have *boundaries* that differentiate them from their environment and other systems, though there may be considerable overlaying of one system on another. In social systems the boundaries are always permeable to some extent; in other words, they can be penetrated at different points. The more permeable the boundary the more open and flexible the system is said to be. Compare a prison, as an example of a relatively closed type of system, with a drop-in centre as an example of a more open system. How open and closed a system needs to be to operate effectively again will depend on the circumstances. Even the universe is no longer regarded as a completely closed and bounded system. Closed systems lose their means of drawing in energy across their boundaries and they die, for example as when a group of people marooned on a desert island lose their supply and means of producing food and water.

Operations

'Input', 'throughput' (con version or transformation), 'output' and 'feedback' are the technical terms used.

   Input is what you must put into a system to make it work, for example, human, physical, material and financial resources must be contributed in the right ways and right amounts to achieve the results required. The 'human' inputs may be described in terms of numbers, time and effort, roles and skills, communications, etc., depending on the system in question. Clearly imbalances between the different kinds of resources needed will affect how

well the system can perform and there will be all sorts of knock-on effects. Good parenting is not helped by having no money. Being short staffed puts pressures on people so that they may not be able to deliver the sort of service they want to give. Lack of secretarial or clerical help may mean more time having to be spent on paperwork and less on direct work with clients.

Throughput is how the resources are used in their entirety to achieve the desired results, for example, what happens after the petrol has been put in and the engine started up. The problem with social systems is that we do not really know sufficiently well how or why things happen as they do. Try to fathom out the real causes of a disruption in a residential setting, for example, and one often starts with a mish-mash of inconsistent and contradictory information. It is only by evaluating the information and relating it to a host of possible interconnected causes that something approaching a satisfactory explanation begins to emerge. No single explanation or cause is ever likely to be valid.

Outputs are the results that you have achieved, the success of which can then be evaluated against the original goals. Evaluation of effectiveness is of course problematical in social work, not least because it is virtually impossible to identify, control and evaluate every factor that contributes to a particular outcome. Evaluation, in systems terms, means identifying the main inputs (needed to achieve stated goals), assessing how these have been converted into practical action (processes), and similarly appraising what results have been achieved, taking all factors into account, not as isolated variables, but interrelatedly.

Feedback is the information and messages received back at different stages in the process. Because of the lack of predictability of social work it is important to obtain feedback continuously so that adjustments can be made that will help to keep one on track. The feedback received can then be used and reconverted as further inputs. This is the basis of good management information and monitoring processes.

Systems processes

The key words are 'steady state' or 'equilibrium', 'reverberation', 'equifinality', 'multifinality' and 'differentiation'.

Steady state is the tendency of systems to maintain themselves in some sort of balance while at the same time moving forwards towards their goals. Systems can be knocked off balance or continue to operate in less than optimum ways, as in a state of chronic depression. Imbalances may be caused by all sorts of things such as deficits of resources, disturbances and breakdowns of parts or all of the system. The effects are sometimes cumulative, for example:

loss of job ? lack of money ? lowering of morale and self-esteem ? increased debt ? impaired personal relationships ? 'uncharacteristic' behaviour ? total crisis.

Reverberation means knock-on effects, which can be far reaching, though the causal path may be difficult to establish. For example, loss of job ? lowered self-esteem, reinforced further by failure to meet expectations developed from childhood ? depression. In this example the links with the person's past may take some time to establish.

Equifinality means that the same results may be reached in different ways and through different routes.

Multifinality means that different results may be obtained in ostensibly similar circumstances because differences in *process* may have occurred, i.e. parts of the system have interacted in different ways. This is quite common in social work, because of the difficulty in identifying and controlling within an intervention plan all of the variables involved.

Differentiation is the means by which systems maintain their 'identity' through the regulation and operation of their boundaries.

AN EXAMPLE OF THE APPLICATION OF A SYSTEMS APPROACH

Rather than dwell on the concepts we can illustrate how a systems approach can be used in practice. Here we use the approach as a set of tools for assessment and planning interventions. The example is not intended to demonstrate any particular 'unitary model' nor, except by implication, to deal with the wider 'systemic' issues, organizational and political, that are often introduced into teaching about a systems approach.

Presenting issues

The school reports to the social services that one of their 15-year-old girls is constantly missing school. When there she is always tired and though of average ability is falling well behind with her school work. The form teacher thinks that she is sexually active.

From further enquiries it is found that the girl is expected to support her mother in looking after her father and younger brother and sister. Her father has had multiple sclerosis (MS) for several years and is now increasingly disabled and confined to a wheelchair. He does not work, but spends most of the time at home, where he is said to be demanding and prone to angry outbursts.

The mother is worn down as she works part time and has also to visit her own mother who is becoming increasingly confused and frail. The grandmother receives some home care support, but this is limited because of financial constraints on the local authority.

The girl has few friends and states that she spends most of her spare time with her boyfriend, aged 17, and admits that they have started having regular sexual intercourse, though they always 'take precautions'.

Further assessment obtains information from each of the main people involved. It is important to do this in order to view the situation from as many angles as possible.

Girl Her stated concerns are:
- 'being put on at home and being treated like Cinderella';
- her younger brother and sister 'get away with doing very little' by way of chores, though they do keep their father company for some of the time;
- confused feelings regarding her boyfriend, who is putting her under pressure to have sex in exchange for giving her time and attention, which no one else does.

Mother Her stated concerns are:
- 'I feel totally overwhelmed, tired out and at the end of my tether';
- 'frustrated because I have no life of my own';
- 'guilty because I expect too much from my daughter'.

Father His stated concerns are:
- 'depressed because I am unable to be a proper father';
- 'I feel useless and unoccupied';
- 'lonely and bored'.

Brother and Sister Their stated concerns are:
- bewilderment and feeling frightened at what is happening to their dad;
- anger at their older sister because she is always 'picking on us';
- not having enough money to spend.

Worker is concerned with:
- the girl's disclosure that she is having sex under age;
- the school's negative and unhelpful attitude to the girl;
- the size of 'my workload'—very high because of staff shortages.

Assessment and action planning

In systems terms all the above statements and disclosures represent 'inputs' to the situation and will affect the process and possible outcomes. How then does an understanding of social systems help with the assessment intervention planning?

First we need to be able to identify and define the relevant social systems and their boundaries; then assess their functioning. Following this assessment it becomes possible to identify possible intervention goals and work out appropriate strategies.

Because of the interrelatedness of systems, we can take almost any starting point. For example, if we start with the girl as our initial perspective, we can think about her developmental needs and how these may or may not be being met:

- her self-concept and self-image, which may be affected by how she is dealing with her biological and physical development and social factors (personality system); here feelings about self as an individual, as a young woman, as a responsible family (female) member, and as someone who needs to find success and achievement may all need to be explored systemically.
- the influences of her family on her development, behaviour, outlook, etc. Here the family as a system clearly requires fuller investigation. In particular we would need to work out whether the stresses clearly experienced within the family constitute a current or approaching crisis and how it has coped and adjusted to its changing circumstances over a period of time.
- her social networks, which determine her relationships with adults and peers. Here there would appear to be deficits in some aspects being compensated for by the over-intense relationship with her boyfriend. Does she aspire to and can she achieve a more 'balanced' social life?
- the environmental systems that support, encourage, prevent or hinder the formation of adequate social networks and development in general (e. g. school, recreational, community and youth facilities); each needs to be mapped out and examined. Analysis of the nature and functioning of these systems will take into account issues about class, gender, race and culture and how these may all influence the situation under consideration.

From the information given it is also evident that overlaying the personal, family and social systems that provide the girl's developmental context is a fairly intense pressure system and it can be hypothesized that it is the accumulation of these pressures which account for the girl's difficulties rather than any single factor. In deciding how to intervene we are therefore presented with a number of options. Which is taken will depend on the assessment. One approach, which is not necessarily (though not excluded by it) based in systems thinking, would be to concentrate on the girl and her problems with the school. For example, we could set up a behavioural programme designed to improve school attendance and behaviour, supplemented by some individual counselling over her sexual relationships with her boyfriend (assuming there are no grounds for invoking child protection procedures).

This would seem, however, only a partial approach which ignores other influences, such as the family stresses and to what extent other situational factors operating in the school may be contributing to the

difficulties. Here we might consider the school's approach to behavioural difficulties and matters of discipline generally, its approach to pastoral care, and the attitudes of individual teachers. Within a systems approach all these factors are potential targets for intervention, so that the *situational* or *contextual* factors that through assessment are found to contribute to the presenting problems can be influenced and modified. In carrying out a 'systems' assessment the 'problem' itself may therefore have to be redefined.

Examination of the effects of the girl's interactions within and between the range of systems identified suggest other possible intervention goals might be:

- to relieve the pressures operating on the family, which will take off some of the pressures on the girl and so enable her to sort out her personal difficulties more constructively;
- to encourage more positive interaction between family members and help them to feel valued and more able to support one another;
- to relieve some of the mother's objective and subjective oppression.

Achievement of any one or all of these goals could arguably assist resolution of the girl's difficulties. Time therefore needs to be spent in exploring and evaluating such possibilities as:

- obtaining more help for the grandmother, thereby reducing the pressure on the mother and consequently on the girl and other family members (an example of 'equifinality' in systems terms);
- assessing whether mother and older daughter can have more 'quality time' together, but achieving this will depend on obtaining some help for the father. Thus:
- is there support forthcoming, e. g. from the local MS society? Would he be helped by or interested in retraining or further education—or something to improve his self-worth?
- is he eligible for additional financial support that would result in more personal care being provided and therefore reduce the pressures on the primary carers?

If reductions of 'pressures' are identified as the immediate goals for the social work effort, then attention must be given to how this can be achieved most effectively. Here, the idea of creating a 'critical mass' to reduce pressures quickly in order to contain problems and make them accessible to longer term interventions is a useful one. But how can this be done given the worker's own predicament of a heavy workload and shortages within the team? The logic of the systems approach would be away from the slow drip of individual casework, where only one or two aspects of the situation can be handled at a

time, to one of greater combined or team working so that a number of issues can be addressed simultaneously. The working arrangements could then be expected to be reviewed and changed as the needs of the case change. The consequences of thinking and working systemically therefore are far reaching, calling into question the whole organization of service delivery, not least at ground or 'team' level.

CONCLUSION

It is important to distinguish between a 'unitary approach', which may or not be based on systems theory, and the use of 'systems thinking' as a social work tool. One can be sceptical about unitary approaches without throwing the baby out with the bathwater and ignoring the potential value of a systems perspective in social work training and practice. Thinking systemically means thinking creatively, laterally, in patterns and looking for alternative ways of reaching common goals. Sometimes this will result in an overcoming of the familiar problem of 'we haven't got the time or the resources'. Hopefully a systems perspective will result in more strategic changes being made to social work practice, such as less reliance on individual casework, more attention to team, group and community based ways of working, and the creative use of residential care not just as residual or optional approaches, but as valid strategies.

REFERENCES

Atherton, J.S. (1989) *Interpreting Residential Life. Values To Practise,* London: Tavistock/Routledge.

Buckley, W. (1967) *Sociology and Modern Systems Theory,* New York: Prentice Hall.

Davies, M. (1977) *Support Systems in Social Work,* London: Routledge & Kegan Paul.

Davies, M. (1981) *The Essential Social Worker,* London: Heinemann Educational Books/*Community Care*.

Douglas, R. and Payne, C. (1989) *Organising for Learning,* London: National Institute for Social Work.

Goldstein, H. (1973) *Social Work Practice: A Unitary Approach,* Columbia: University of South Carolina Press.

Hearn, G. (ed.) (1968) *The General Systems Approach: Contributions Toward a Holistic Conception of Social Work,* New York: Council on Social Work Education.

Jordan, B. (1977) 'Against the unitary approach to social work', *New Society,* 2 June.

Minuchin, S. (1974) *Families and Family Therapy,* Cambridge, MA: Harvard University Press.

Payne, C. (1977) 'Residential social work', in H.Specht and A.Vickery (eds) *Integrating Social Work Methods,* London: George Allen and Unwin.

Payne, M. (1991) *Modern Social Work Theory. A Critical Introduction,* London: Macmillan.

Pincus, A. and Minahan, A. (1973) *Social Work Practice: Model and Method,* Itasca, IL: F.E.Peacock Publishers Inc.

Smale, G., Tuson, G., Cooper, M., Wardle, M. and Crosbie, D. (1988) *Community Social Work: A Paradigm for Change,* London: National Institute for Social Work.

Specht, H. and Vickery, A. (eds) (1977) *Integrating Social Work Methods,* London: George Allen and Unwin.

Thompson, N. (1991) 'Putting theory into practice. A study of practice records', *The Journal of Training and Development* 1(4):55–60.

Triseliotis, J. (1978) 'Beyond the unitary approach', *Social Work Today,* 8 May, 20–2.

Von Bertalanffy, L., Hempel, C.G., Bass, R.E. and Jonas, H. (1951) 'General systems theory: A new approach to unity of science', *Human Biology* 1(vi):302–61.

Whittaker, J.K. and Garbarino, J. (1983) *Social Support Networks: Informal Helping in the Human Services,* New York: Aldine Publishing.

ADDITIONAL RESOURCES

Chris Payne talking to Malcolm Brown on 'The Systems Approach', MBA Video Productions, 1992. Distributed by Pavilion Publications, Brighton.

See also Sutton, C. (1987) *A Handbook of Research for the Helping Professions,* Part 1, 'Principles and concepts of working within the human social system', London: Routledge & Kegan Paul.