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Sue Evans
Southern Cross University

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Changing the knowledge base in Western herbal medicine.

Sue Evans, Southern Cross University

Abstract

The project of modernising Western herbal medicine in order to allow it to be accepted by the public and to contribute to contemporary healthcare is now over two decades old. One aspect of this project involves changes to the ways knowledge about medicinal plants is presented. This paper contrasts the models of Evidence-based medicine (EBM) and Traditional Knowledge (TK) to illuminate some of the complexities which have arisen consequent to these changes, particularly with regard to the concept of vitalism, the retention or rejection of which may have broad implications for clinical practice. Illustrations from two herbals demonstrate the differences between these frameworks in regard to how herbs are understood. Further, a review of articles on herbal therapeutics published in the Australian Journal of Herbal Medicine indicates that practitioners are moving away from TK and towards the use of EBM in their clinical discussions.

Introduction

> There is a battle 'for truth' or at least 'around truth' – it being understood once again that by truth I do not mean 'the ensemble of truths which are to be discovered and accepted' but rather 'the ensemble of rules according to which the true and the false are separated and specific effects of power attached to the true' (Foucault, 1991, p. 74)

The massive increase in public acceptance of herbal medicine is evidenced by high levels of utilisation of products and practitioners, and this trend has been documented in Australia over the last decade, most comprehensively by MacLennan (MacLennan, Myers, & Taylor, 2006; MacLennan, Wilson, & Taylor, 1996, 2002). This acceptance has not occurred in isolation, but is influenced by competing and collaborating concerns of herbalists, herbal manufacturers and herbal educational institutions in whose interest it is to encourage the public's demand for herbal medicine. In addition regulatory bodies, consumer groups and orthodox healthcare professionals, who may have different aims and interests, also influence the context and possibilities of herbal usage.

While the increased public utilisation of herbal medicines is largely reflected in consumption of over-the-counter medications, here I focus on herbal medicine in a slightly different context: that of clinical herbal practice. Herbalists are defined as health practitioners who engage in extemporaneous compounding of herbs for therapeutic purposes for individuals under their care (Lin, Bensoussan, Myers, McCabe, Cohen, Hill, et al. 2005). This paper concerns Western, or European, herbal practice in Australia. It does not address for example the use of medicinal plants by Indigenous Australians, the use of herbal products sold in pharmacies and health food shops, or the prescription of herbal products as substitutes for pharmaceuticals by biomedical practitioners and others. It is also differentiated from herbal medicine used within other formal systems of traditional medicine, for example, Traditional Chinese Medicine and Ayurveda, systems of herbal medicine which arise from the cultures of China and India respectively.

In this paper influences from two systems of knowledge generation are identified within Western herbal medicine: Evidence-based medicine (EBM) and Traditional Knowledge (TK). I suggest that these systems are not readily compatible, particularly with regard to the controversial notion of vitalism, an idea which is rejected by the former and valued by the latter. I use the approach of Canguilhem on vitalism to suggest that this rejection or acceptance may have broad implications for the practice of Western herbal medicine. A comparison of the description of medicinal plants in two herbal texts, one recently published which uses phytochemistry and EBM as its basis, and the other a classic herbal of the early 20th century, which documents traditional lore, details the very different information which is communicated when using EBM or TK. This is followed by a review of the literature on herbal therapeutics published in the *Australian Journal of Medical Herbalism (AJMH),* which indicates that the ways in which practitioners describe their treatment of patients during the last twenty years has changed and reflects an increased reliance on EBM at the expense of TK.

This paper illustrates tensions between EBM and TK in the context of the daily practice of Western herbal practitioners and their continuing development of their knowledge base of the medicinal actions of plants. The work contributes a different

perspective on the existing discourse on traditional knowledge and Western science (Connor, 2001; Dods, 2004; Dutfield, 2003; Laird, 2002; Mazzocchi, 2006) in that it considers the practical effects of these contrasting approaches on the development of knowledge within a non-indigenous professional group in a non-traditional society.

Cultural and regulatory context

The complex processes which have led to the increased acceptance of Western herbal medicine have affected the practice of herbal medicine itself as well as the type of herbal products which are manufactured (Jagtenberg & Evans, 2003). When the new wave of public support for herbal medicine first became evident in the late 1970s and 1980s, herbal leaders, initially in the UK, were clear that in order for public acceptance to occur, herbal medicine needed to be redefined as scientific herbal medicine and distanced from folk medicine and witchcraft (see Griggs, 1997; Zeylstra, 1992). This view has been adopted in Australia and is reflected for example in the educational requirements for professional membership of the National Herbalists Association of Australia (NHAA)[i] which has a long history of lobbying for the professionalisation of herbalists. From this perspective, the appropriate modernisation of the knowledge base, the way to 'bring herbal medicine into the 21st century', involves employing the discourse of science to explain the medicinal actions of plants (Mills & Bone, 2000).

However this emphasis on science is not uncontroversial within the herbal profession, and has led to divisions between herbalists. These divisions between practitioners who support the 'scientisation' of herbal medicine and those who do not, have been evident for some years (Conway, 2005; Dougherty, 2005; Griggs, 1997) and the term 'phytotherapy' is now used to refer to rational, scientific herbal medicine (Heinrich, Barnes, Gibbons, & Williamson, 2004; VanMarie, 2002) More recently the term 'traditional herbal medicine' has been used by some authors to refer to the practice of those herbalists who challenge the primacy of science as an appropriate foundation for herbal practice. Traditional herbalists employ a herbal philosophy which emphasises vitalism and holism and a very individualised approach to treatment (Baer, 2004; Coulter, 2004; Dougherty, 2005; Singer & Fisher, 2007).Their ideas are congruent with those of commentators who hold that herbal medicine, like other disciplines within Complementary and Alternative Medicine (CAM), can be distinguished from

biomedicine by reference to underlying principles which are not just distinct from biomedicine but incompatible with it (Capra, 1982; Coulter, 2004). It is this tension between scientific and traditional knowledge and their application to the clinical practice of herbal medicine which is the focus of this paper.

Evidence-based Medicine (EBM) and herbal medicine

Evidence-based medicine has become popular in the West since the 1990s. It was developed as a way to evaluate and generate biomedical knowledge, and of linking research findings with clinical application. A classic, often repeated definition of EBM is the following:

> Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. (Sackett et al., 1996, p. 71)

EBM has had a major impact on the process of clinical decision-making by making such processes more transparent. This has allowed an increase in the participation of patients and funding bodies (in particular the State and medical insurance companies) who have found a role alongside medical practitioners in decision-making in regard to treatment (Rodwin, 2001) EBM has become broadly accepted as an appropriate basis for decisions around patient care, and made doctors more accountable, although it is not without its critics in terms of the extent and manner of its application (see for example Holmes, Murray, Perron, & Rail, 2006).

By establishing hierarchies of evidence, EBM ranks the evidence base on which clinical decisions are made. Of primary importance, therefore, are definitions of evidence, and so the question 'what counts as evidence?' arises. At the top of the EBM hierarchy is evidence which arises from the results of randomised controlled trials (RCTs) (preferably a review of a number of individual trials), and at the base are those made solely on the opinions of individual practitioners, and empirical evidence. This hierarchy is illustrated in Table 2. Level 1 evidence, i.e. systematic reviews of RCTs, is thus considered to be more reliable evidence (more 'true') than level 2

evidence, with one relevant RCT, or level 3.1 evidence where trials are not randomised, and so on. Thus while RCTs are not the only type of evidence accepted within EBM, they are the 'gold standard' of research and considered most reliable.

Table 2 Hierarchies of evidence in Evidence-based medicine. Adapted from Willis and White Evidence based medicine and CAM (E Willis & White, 2004, p. 50)

Concerns have been raised with regard to the application of EBM as a treatment rationale for herbal medicine. Some authors suggest that EBM is paradigmatically incongruent with core natural medicine principles including vitalism and holism (Coulter & Willis, 2004; Jagtenberg et al., 2006), and that RCTs are inappropriate tools with which to assess herbal medicine (Baer 2004). RCTs work best when examining a single intervention. Clinical herbal practice rarely involves single interventions, but rather is characterised by its use of individual and complex interventions. Because it is tailored to treatment of an individual rather than of a condition, individuals with the same condition are likely to receive different treatments. Such an approach is complex not only because individual herbs are complex substances containing a range of constituents, but also because herbalists individually formulate combinations of herbal extracts (Casey, Adams, & Sibbritt, 2007). Such treatment is routinely complemented by individualised therapeutic advice, for example involving changes to diet and lifestyle (Jagtenberg et al., 2006). (Green, Denham, Ingram, Sawkey, & Greenwood, 2007) and the resulting complexity of herbal practice cannot be reflected if reduced to single-interventions required by conventional RCTs. Other methodologies are required to allow for assessment of highly complex interventions.

Further, it must be noted that the gathering of evidence, particularly Level 1 evidence (RCTs), is expensive. In a political climate where the state is reluctant to provide funding for research generally, the burden of funding research falls to manufacturers, who use these research results in advertising and to provide evidence to fulfil registration requirements of their products. This introduces bias in terms of the types of interventions which are researched, which if funded by manufacturers are likely to be limited to commercially significant products. Substances and interventions without

such potential application are left off research agendas and this includes much of herbal practice.

As stated previously EBM, with its focus is on measurable clinical results, is now the standard applied to judge the efficacy of biomedical treatments. It is of particular interest to herbalists because it has been argued that within the framework of EBM, any therapeutic intervention may be established as valid if appropriate evidence (preferably Level 1) can be provided (Ernst, 2000). Explanations with regard to plausibility of mechanism of actions are not required if the evidence is provided. However this is not only a 'carrot' to herbal medicine offering acceptance via the use of EBM. At least one call has been made for the rejection of clinical herbal practice on the basis of an absence of RCTs investigating the efficacy of individually prescribed herbal mixes (Guo, Canter, & Ernst, 2007).

Traditional knowledge (TK) and herbal medicine

In this paper, the term 'Traditional Knowledge' is used to cover a range of fields which are variously referred to Traditional Ecological Knowledge, Indigenous Knowledge and folk knowledge. All of these terms relate to the knowledge which has been developed by indigenous and traditional cultures with regard to their environment. Discussion of TK is found within a wide range of fields including anthropology and ethnobotany (Cotton, 1996); conservation and ecological studies (Alexiades & Laird, 2002; King, 1996); development studies (Bodeker, Kronenberg, & Burford, 2007; Rahman, 2004) and, where it is related to Intellectual Property issues, law (Gollin, 2002; Lettington, 2002; Tobin, 2002).

Bourque, Inglis and LeBlanc (1993, p. iv) define TK as

> …the knowledge base developed by indigenous and local peoples over many hundreds of years through direct contact with the environment. It includes a detailed knowledge of plants, animals and natural phenomena the use of appropriate technologies for hunting, fishing, trapping, agriculture and forestry, and a holistic knowledge or 'world view' which parallels the scientific discipline of ecology.

TK has received increased attention since the Rio Earth Summit of 1992, which as part of an agenda aimed at ensuring long term planetary sustainability, and emphasised the need to further recognise and appreciate the contribution of indigenous people's ecological knowledge. Following the argument of Ellen and Harris (1999) that folklore, for example as related to bee-keeping or pigeon-fancying, gardening or using medicinal plants, should be understood as the TK of the West, it is argued here that traditional knowledge of the Western materia medica, with its basis in folklore may be considered as part of the surviving TK of the West.

Johnson (1992), a Canadian anthropologist, characterises the features of TK from work with indigenous communities. Broad similarities can be identified between the features she lists and those found within the folk understandings of Western herbal medicine. Three of these characteristics are of particular interest here. Firstly Johnson suggests that traditional knowledge is generated over an extended period of time, by the 'folk' rather than by experts, using observation, not experiments. This parallels the generation of knowledge in herbal medicine. There are very few records of herbs being 'discovered' by individuals or groups in the way that scientific discoveries are made, rather knowledge of medicinal plant uses is developed within the community. Secondly, she suggests that traditional knowledge is transmitted orally, which is consistent with Lyotard's (1997) discussion of narrative as the primary form of transmission of traditional knowledge. While contemporary Western culture is not an oral culture, transmission of information about plants via narrative continues to occur. References to medicinal plants within stories and songs are a fruitful line of investigation, as demonstrated in work examining references to medicinal plants in popular songs (Evans, 2001). Finally Johnson places an emphasis on spirituality within traditional knowledge and an understanding that matter has a life force and that human life is not superior to other life forms. The acceptance or rejection of this perspective is associated here with the acceptance or rejection of the notion of vitalism. While some herbalists employ this approach, others find it problematic, especially when they are trying to establish herbal medicine as scientifically credible.

The problem of vitalism

The Enlightenment and the subsequent rise of modern science is a significant watershed in the development of Western herbal practice. The Enlightenment initiated

a separation between secular and sacred domains and knowledge. Prior to this time, the earth was understood as alive and humans were seen as part of, not separate from, the cycles of nature (Leslie, 1994; Sheldrake, 1990).

The Macquarie Dictionary defines vitalism as

> the doctrine that ascribes the functions of a living organism to a vital principle distinct from chemical and other forces (Delbridge, 1981 p.1940)

A range of terms have been used in Western herbal medicine to refer to this principle, and the following table has been constructed to summarise the major ideas.

Table 2: Concepts related to Vitalism in European herbal medicine

The terms listed in this table are often used interchangeably within herbal medicine, but they have arisen in different contexts, in different historical periods, and are not identical. Vitalism refers to a quality which animates all biological entities (McCabe, 2000; Sheldrake, 1990) whereas *vis mediatrix naturae* (the healing power of nature) is a description originating in the Hippocratic writings, of a principle by which the body recovers from disease (Pitman, 2005). The Roman physician Galen used the term *pneuma* to refer to a vital spirit (Nutton, 2004) whereas later writers from the 19th and early 20th century, including the American herbalist Samuel Thompson, understood *vital force* to be a concrete, robust force (Wood, 2000), and one which moves the body towards healing .

The terms listed above introduce a rich tradition of vitalistic thought within Western philosophy which has underpinned the practice of Western herbal medicine from the time of Hippocrates until the present. However vitalism remains problematic for science, which attempts to understand the world without recourse to such concepts. Greco (2004, p. 690) for example, states that among many scientists vitalism is 'associated with lack of intellectual rigor, anti-scientific attitudes, and superstition'. Coulter and Willis (2004, p. 588) claim that vitalism is 'the basis of the claim that biomedicine and CAM are distinct paradigms' yet its existence is rejected by science. While Smuts (1926) suggested that the term 'holism' would be an appropriate substitute for vitalism which was more broadly acceptable to scientists, some now

consider the term has now become unhelpfully vague, being used to refer to 'any therapy that does not consider its clinical perspective to be reductionist' (Kaptchuk, 1996, p. 44).

Georges Canguilhem's (Canghuilhem in Delaporte, 1994) perspective on vitalism allows its role in clinical herbal practice to be considered from a slightly different perspective, and also explains the influence on clinical practice of its adoption as a clinical principle. Understanding vitalism as a moral position rather than a scientific fact, Canguilhem suggests that vitalism does not need to be proven, but, as a morality, can be chosen. He explains vitalism as 'a biology for physicians sceptical of the healing power of medication' (Canguilhem in Delaporte, 1994, p. 287). He suggests that treating 'as if' vital force exists leads to clinical thinking which promotes therapeutic conservatism, because intervention is understood as a method by which the vital force and *vis mediatrix naturae* can be supported.

This perspective is used by herbal practitioners who see their work as enabling self healing to occur, rather than to understanding their prescription of herbal remedies as directly countering pathological processes. This is one reason for their preference for multi-intervention treatment (e.g. a combination of a number of herbs, dietary changes and changes to lifestyle) rather than the reliance on a single therapeutic substance or intervention. This approach does not require high doses of herbs (as they are prescribed in combination with other treatments) which in turn reduces the amount of raw material required for treatment. Concentration and dosage become a consideration as the demand for medicinal plants increases, which is a contributing factor broader pictures of environmental stress as plant populations are over-harvested (Hamilton, 2004; Jagtenberg & Evans, 2003). The importance of vitalism relates to its role in encouraging minimal intervention and clinical conservatism.

Canguilhem's appeal to vitalism as morality is not likely to be accepted by scientists who see no place for such appeals within in scientific endeavour. However some practitioners and patients are sceptical of the ability of scientific progress to lead to social progress, citing continuing problems for example the current widespread ecological degradation, unremitting cycles of poverty, and continuing civil unrest which remain unsolved (Capra, 1982; Gross, 1992; Harding, 1986; Jagtenberg, 1987;

Sheldrake, 1990; Wright, 2004). For these groups, arguments about the implications of vitalism as a therapeutic principle which may lead to a more ecologically sustainable future for herbal medicine through decreasing the amount of raw material required in the manufacture of herbal products, may carry more weight.

Application of EBM and TK in the clinical practice of herbal medicine

In an attempt to further explore the issues surrounding EBM and TK in herbal clinical practice, a comparison was undertaken between two herbal texts which describe the medicinal actions of plants from very different perspectives. Braun and Cohen's Herbs and Natural Supplements 2nd Edition (2007) is based on EBM, while Grieves' Modern Herbal (1931) is a classic of European folklore of medicinal plants. Further, in order to investigate the relative use of traditional and evidence-based knowledge within the context of Australian herbal practice, a review of the *Australian Journal of Medical Herbalism* (*AJMH*) was undertaken in relation to articles about herbal therapeutics. These articles were chosen as they provide descriptions by herbalists of the application of herbal medicine for specific conditions. The language used in descriptions of clinical application of herbal medicine was examined for indications of the reliance of the authors on evidence-based information and concepts associated with traditional understanding of herbal treatment.

EBM and TK in the herbals

The differences between EBM and TK are not limited to an acceptance or rejection of vitalism. EBM encourages clinical accountability and addresses the idea of risk, both of which are major drivers in healthcare provision while TK allows for the inclusion of cultural associations and environmental considerations. The challenge which has arisen for herbal medicine is that moves to 'become more scientific' involve the preferencing of EBM and the rejection of the folk aspects of the craft which are most closely related to TK.

EBM and TK both have their own 'rules of truth' which are used to determine the ways that knowledge about medicinal plants is presented. An illustration will clarify this point. Descriptions of a common medicinal plant, rosemary (*Rosemarinus*

officinalis) in two herbals are presented in the following section[ii]. This particular plant has wide utilisation in both contemporary and traditional herbal medicine. Neither Braun and Cohen nor Grieve has been chosen as a 'typical' herbal, if there be such a thing, but they have been chosen because they illustrate very different approaches to communicating knowledge about plants. Grieve uses TK (which allows for the maintenance of a vitalistic perspective) as a basis for the material she presents, while Braun and Cohen use EBM (which does not).

These books have very different origins and aims. Braun and Cohen's (2007, Preface) stated aim is to provide up-to-date information on the 'modern uses and scientific research' of herbs and nutritional supplements commonly used in Australia and New Zealand. The emphasis in this book is firmly on documenting the published scientific evidence relating to individual herbs and nutritional supplements. The authors see the book as 'contributing to "raising the bar" in the complementary medicine debate (and promoting) a spirit of collaboration between all healthcare professionals and their patients' (Braun & Cohen, 2007, Preface). As such, its focus is on addressing the needs of these professionals. This includes providing the answers to the questions they may have about evidence, efficacy of herbs in the treatment of specific pathologies, possible connections between plant constituents and therapeutic actions, and possible interactions between pharmaceuticals and herbal products. In contrast, Grieve's book ('Mrs Grieve' to generations of herbalists) grew out of a series of leaflets she had written for the Home Office to encourage Britons to harvest medicinal plants as part of the war effort during World War 1 (Bennett, 1991) and it was welcomed by its editor, Hilda Leyel, as including 'traditional lore and properties of plants' (Grieve, 1931/1980, p. xiii). It is not a handbook specifically for practitioners, and does not suggest approaches to treatment. It records a broad range of information about each plant.

Both books comprise of a series of monographs about individual herbs. Braun and Cohen also include foods and nutritional supplements, while Grieve limits herself to medicinal plants. Each herbal monograph begins by presenting the relevant common name, Latin binomial, part used and botanical family. This information is largely similar between the books, differences occurring mainly where plant families or Latin binomials have changed between 1931 and 2007. Each monograph also includes a list

of plant constituents, therapeutic actions, and indications, i.e. examples of conditions in which the plant may be useful. However the differences between the herbals go further than simple reflections of historical styles and content. Braun and Cohen's book reflects scientific understanding and Grieve documents broad cultural knowledge.

Of particular interest is the way in which risk and danger are addressed in the two herbals. Braun and Cohen are concerned with risk, whereas Grieve discusses danger but not risk. The difference between risk and danger is identified by the Macquarie Dictionary as the presence of chance – risk is 'exposure to the chance of injury or loss' (Delbridge, 1981, p. 1491) whereas danger is the 'liability or exposure to harm or injury' (Delbridge, 1981, p. 471). One aspect of the rise of the 'risk society' (Giddens, 1991, 1999) is the importance now placed on risk management within healthcare delivery. Risk management has become integral to assessments of quality in healthcare, and increasingly is backed by procedural if not legal requirements (Swage, 2000). Questions of the level of risk posed by herbal medicines are necessarily raised as its use becomes more widespread (Bensoussan, Myers, Scott, & Cattley, 2005). However this concern is reflected in modern herbal texts (including Braun and Cohen), not those texts which record traditional information (including Grieve) when concern was limited to 'danger', typically by the ingestion of toxic plants.

Within Braun and Cohen's text the concern with risk is reflected in subheadings which include not only 'toxicity' but also 'significant interactions', and 'contraindications and precautions' which ensures that readers are well versed in possible sequelae. Grieve's information is limited to the signs of poisoning and appropriate interventions required by a relatively small number of particularly toxic herbs, eg belladonna *Atropa belladonna* and foxglove *Digitalis purpurea.*

A further point about risk should be considered. While the argument might be made that Braun and Cohen's work represents advances in herbal knowledge, it is also relevant that the authors differ in what is actually referred to by the word 'herb', that is, what the authors take as their central subject matter. Grieve refers to individual plants, i.e. the living plant and unprocessed or minimally processed plant material.

She makes suggestions as to the variety of ways in which the plant may be understood and cared for and the ways in which herbal material may be prepared. In contrast Braun and Cohen do not use information regarding the crude plant, but rather their information is derived from research which has been undertaken

> on a particular herbal extract or preparation at specific doses, and the evidence for the efficacy of herbal preparations must be related back to the preparation used in the research (Braun & Cohen, 2007, p. 18)

Thus Braun and Cohen substantiate their claims by reference to herbal products, and very specific, often highly concentrated, herbal preparations, while Grieve's focus is the plant itself. This relates back to the issue of risk. For Braun and Cohen, risk is an issue related to specific products, although in practice it may be extrapolated to other products of the same plant species. Importantly, risk is associated with the threat of litigation, which requires someone to take the blame. It is possible to blame, and sue, the manufacturer of a product which has caused harm or the practitioner who has prescribed it: it is impossible to sue the plant itself[iii].

The herbal in detail: Rosemary (*Rosemarinus officinalis*)

After a very brief summary of the history of the plant's uses, Braun and Cohen's monograph addresses those actions of the preparations of rosemary for which there is evidence, both in vitro and in vivo (Braun & Cohen, 2007, pp. 545-548). In vitro evidence for rosemary includes antioxidant, antibacterial anti-inflammatory, hepatoprotective and chemoprotective and antimutagenic activity. In vivo evidence, including the 'gold standard' of randomised controlled trials supports its use for increased mental concentration, alopecia, and as an antispasmodic, and chemoprotective agent. This research is reported in detail and other activity, with 'lower' levels of evidence including its effect on menopausal symptoms, is briefly mentioned with the suggestion that they require further investigation. Thus the presentation of this material is consistent with an evidence-based framework.

The research on which this information is based is carried out on specific extracts, and the results claimed only for those extracts, rather than for the crude plant. The focus is therefore on herbal products which have demonstrated measurable outcomes in the

relatively short period of a clinical trial. In order for a herb to 'prove' its therapeutic potency in a clinical trial it needs to be presented in a form that is standardised (for reliability and consistency) and concentrated (to provide a measurable physiological change in a short period of time).

In contrast, the description of rosemary given in Grieve's Modern Herbal (Grieve, 1931/1980, pp. 681-683) begins with a botanical description of the plant and its habitat, and recommends methods of cultivation. She lists constituents and describes the effect that the herb has on the human body (tonic, astringent, diaphoretic and stimulant) and suggests therapeutic applications for it (for alopecia, as an application for paralysed limbs, as a cordial for weak hearts, for specific types of headache, and so on). She goes on to detail the uses of the plant in cultural events (weddings, funerals, as protection against disease and evil spirits, during Christmas festivities). Literary references (Ben Jonson; Thomas More) and references to historical figures (Anne of Cleves; Elizabeth, Queen of Hungary in 1235) and historical herbals (Gerard's Herbal; Bancke's Herbal) are included alongside recipes for the home preparation of medicines and detailed instructions for their application. Thus her monograph draws on a broad cultural history and details of the folk knowledge and common use of plants in different geographic areas of the UK as well as other parts of the world. Her focus includes the living plant as well as the plant as a crude drug, and the cultural references indicate an appreciation of the plant that goes well beyond constituents and specific actions. Thus Grieve's description of rosemary encompasses a very broad range of information,

Braun and Cohen's focus is on the herb as a commodity to be bought and sold excludes any clear sense of the intrinsic value of the herb as herb for either spiritual or more pragmatic reasons such as ecological sustainability. This view contrasts with Grieve's broad ranging information which includes myths, stories and anecdotes, recipes and household hints. Her book documents folk knowledge which has been used for generations to assist individuals and communities to care for themselves.

This discussion demonstrates the differences between herbal knowledge based on EBM and herbal knowledge which is developed from folk knowledge or TK. The 'scientisation' of herbal medicine can be understood as a strategy of

professionalisation (VanMarie, 2002). Braun and Cohen's book is appropriate for herbalists who are professionalising in a society where EBM and risk management are firmly embedded in the understanding of what it means to be a health practitioner, and when sophisticated herbal products are increasingly popular. Grieve's book, on the other hand, is more of a handbook of traditional knowledge of European herbal medicine. Her work contributes a multi-faceted view of the plant within the context of its physical and cultural environment, and encourages the maintenance of an older folk tradition of medicinal plant use via its inclusion of stories and recipes. Her approach is congruent with a traditional vitalistic perspective, although she does not overtly refer to plants in this way. With its detail on the growing needs of each remedy, her work can be used as a resource for those herbalists who wish to develop a sensitivity regarding the physical requirements of their use of individual herbs.

This is of particular significance given that the experience of most herbalists and consumers in Australia is with plant products (usually liquids, tablets or capsules) rather than with unprocessed fresh or dried plant material, or the plants themselves (Casey, Adams, & Sibbritt, 2007). Traditional knowledge with its emphasis on plants as plants involves a connection with the environment becomes more tenuous with the increasing use of sophisticated of plant products.

Articles on herbal therapeutics in the Australian Journal of Medical Herbalism (AJMH) 1989-2008

The *AJMH* has been published by the NHAA since 1989 and a statement in each issue describes it as including 'material on all aspects of medical herbalism, including philosophy, phytochemistry, pharmacology and clinical application of medicinal plants'. A review of original articles published between the Vol 1:1 in 1989 (month not stated) and Vol 19:2 in June 2008 located a total of 285 original articles. In order to explore the ways in which herbalists describe their treatment of patients, articles written by clinical herbalists on herbal therapeutics, i.e. the herbal treatment of specific conditions, were identified. In total, 31 articles on herbal therapeutics were found.

Articles excluded from the review included those which dealt with the actions of individual herbs or groups of herbs; those which dealt with specific conditions and not their herbal treatment; articles on therapeutics which were not written by practising herbalists and those which dealt with individual case histories without including discussion of the specifics of the condition and broad therapeutic approaches to its management.

While the total number of articles is small, further analysis of their content is justified because of the unique place this journal has within Australian herbal practice. It is the sole Australian journal which deals specifically with the clinical practice of herbal medicine. A broad analysis is presented in Table 3 below, with the articles collated in five-year periods.

Table 3 Therapeutic articles in the *AJMH*

Two initial points are made in relation to this table. Firstly the number of articles on herbal therapeutics published in the *Journal* has decreased during the last decade. 22 articles were published on therapeutics out of a total of 149 (14.76%) articles in the first ten years whereas 9 articles were published on therapeutics out of a total of 136 (6.6%) articles in the next decade. Secondly, it is of note that herbalists publishing in this journal overwhelmingly use the language and concepts of biomedicine: almost every article in this review includes biomedical concepts, most commonly in the description of the condition treated. This indicates that herbalists' understanding of illness is congruent with that of biomedicine.

The review also demonstrates an evidence-base for clinical practice through references both to clinical research into herbal interventions and phytochemical research with regard individual plants and their constituents. While such references were largely absent prior to 1992, nearly three quarters (14 of 19) of the articles published since then refer to literature in these fields.

Just under half of the articles (15 of 31) refer to concepts which can be seen as part of traditional herbal philosophy, a philosophy which is essentially vitalistic. These concepts include references to humoral medicine based on the four-element theory, to

physiomedicalism which arose in the 18th century US, and include functional diagnostic categories used by herbalists including lymphatic congestion, enervation and organ dysfunction. It is of particular note that while during the first five years of the Journal's publication specific references to vitalism almost equalled those of herbal philosophy (9 references to vitalism, 11 to herbal philosophy), this is no longer the case and there have been no references to vitalism in the last five years.

The review shows that an evidence-base for practice is increasingly apparent in descriptions of therapeutic interventions, and references to herbal philosophy and to vitalism are decreasing. Discussions with the editor of the *Journal* indicate that an emphasis on science within the *Journal's* focus has meant that articles on herbal therapeutics are now expected to be more research-based than they were in the early years of the *Journal* (pers.comm. Anne Cowper 3 June 2008). No claims are made here as to the extent to which these the articles reflect the actuality of clinical herbal practice.

Discussion and Conclusion

While lipservice has been given to attempting 'a grand synthesis of the new and the old, a hybrid that vigorously does justice to both' (Mills, 1991 p.11), the nature of the tradition which is the source of the old knowledge and the complexity of practically effecting such a combination receives scant attention in herbal discourse. Such an approach would need to incorporate research from medical and plant science alongside research informed by the diverse branches of social sciences and the humanities including anthropology, history, philosophy, politics, sociology, cultural studies, visual arts, music and literature. This discussion is not yet evident. While 'traditional use' is accepted as a basis for therapeutic claims made about herbal products (in Australia at least) current herbal literature is increasingly focussed on phytochemistry and clinical trials. Rather than being incorporated into existing traditional herbal knowledge, these disciplines are replacing it. The concern of some educationalists that the 'imposition' of science comes at the cost of these older approaches to practice (McCabe in Lin et al., 2005) is borne out by the review of articles in the *AJMH*.

Tensions between the use of herbs as phytopharmaceuticals and the use of herbal medicines prepared traditionally have been discussed previously (Jagtenberg & Evans, 2003). In this paper I use the work of Canguilhem to extend that discussion to the broader question of herbal practice. Canguilhem's (Delaporte, 1994) suggestion that vitalism leads to therapeutic conservatism opens up a discussion of the *implications* of treatment approaches (in this case the use of vitalism as a therapeutic principle) and is important in this context. His further suggestion that vitalism should be understood as a moral position rather than as a scientific fact may be central to the development of a modern herbal medicine which allows traditional knowledge – where vitalism and the sanctity of the earth is central - to be valued in its own right and in all its complexity.

To reiterate, EBM encourages the development of herbal knowledge based on products which have been made from plants rather than on the plants themselves. The use of manufactured herbal products distances us, rather than connects us, with the plants in their raw, or natural, state because to a consumer, a herbal pill appears more similar to a drug than a herbal tea or combination of extracts. Arguments that such distancing is an inevitable part of modern life do not take into account the popularity of farmers' markets, organic produce and the slow food and fair trade movements. Locally grown good quality medicinal plants and low-tech products made from them are a logical complement to these activities

The integration of EBM and TK could contribute to a revitalised approach to herbal practice in part by opening up a debate not only on the political and economic consequences of 'what counts as true' in herbal medicine, but the therapeutic and environmental consequences of traditional vitalistic and emerging phytotherapeutic approaches to practice as well. As participants in a developing area of study, herbalists are in a unique position to formulate new 'rules of truth' for the discipline. However the evidence presented here suggests that, at least for Australian herbalists publishing in their professional journal, no such task is currently being undertaken.

Level 1	Systematic review of all relevant randomised controlled trials (RCT)
Level 2	At least one relevant randomised controlled trial
Level 3.1	Controlled trials without randomisation
Level 3.2	Case control or cohort studies involving more than one centre or research group

Level 3.3	Multiple time series with or without intervention
Level 4	Clinical opinions of respected authorities, descriptive studies or reports of expert committees

Table 1 Hierarchies of evidence in Evidence-based medicine. Adapted from Willis and White Evidence based medicine and CAM (Willis & White, 2004, p. 50)

Concept	Meaning
Vitalism	life cannot be understood just through principles of physics and chemistry (Sheldrake, 1990 p79)
Vis mediatrix naturae (healing power of nature)	An understanding, originating with Hippocrates, that the body has a natural tendency to recover from disease (Pitman, 2005 p 107; Whorton, c2002 p 6)
Pneuma	spirit – Galen (Holmes, 1989) (Nutton, 2004, p. 234)
Vital force/life force	Self-regulating and self-healing, creative, directive intelligence; the Archeus of Paracelsus (Wood, 2000 p 14); of early naturopath Lindlahr (1919), also of Thompson and the Eclectics (Wood, 2000 p 102)

Table 2: Concepts related to Vitalism in European herbal medicine

Volume, date	Original articles	Articles on herbal therapeutics	Refer to biomedical concepts	Evidence base for practice	Refer to herbal philosophy	Refer to Vitalism
1989-1993 Vol 1-5	78	12	11	2	6	5
1994-1998 Vol 6-10	71	10	10	7	5	3
1999-2003 Vol 11-15	72	5	5	4	3	1
2004-2008 (to June) Vol 16-20(2)	64	4	4	3	1	0

Table 3 Therapeutics articles in the *AJMH*

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[i] The following description of modern herbal medicine and the training requirements of herbalists is found at the NHAA website, directed at the media and regulators (www.nhaa.org.au). 'Modern medical herbalists are professionals who work as part of a health care team including general medical practitioners, medical specialists, nurses, physiotherapists and more, all for the benefit of our patients. The training required to produce such a health care professional is considerable, and includes education in traditional herbal medicine, modern medical sciences, plant chemistry and pharmacology, modern herbal therapeutics and more.'

[ii] Within Western herbal medicine, herbals are books which records the uses of medicinal plants

[iii] However the plant itself may be 'banished'. If a plant is considered sufficiently dangerous its supply may be limited by its inclusion in the Standard for Uniform Scheduling of Drugs and Poisons, and depending on the Schedule on which it is placed it may be available for example only via a pharmacist, or medical prescription, or it may be completely prohibited for sale or supply.