Against a backdrop in which in which psychology is being increasingly criticised for failing to meet the pressing needs of Third World peoples, we report findings from Malawi relevant to the management of health services in the tropics. Surveys of beliefs regarding malaria, schistosomiasis, epilepsy and psychiatric symptomatology have all revealed a remarkable "tropical tolerance" for both modern medical and traditional forms of health service: belief in the "medical" consistently does not preclude belief in the "traditional", and vice versa. This paper presents reliable psychological evidence which may refute the universality of the dissonance reduction process, while supporting the integration of "traditional" types of health care into the predominantly "medical" and extremely understaffed Malawian health care system. We derive hypotheses from this newly appreciated theoretical axis which may also have applications in other developing societies.

From Dissonance to Tolerance: Toward Managing Health in Tropical Cultures

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Background and Rationale

For some years now we have had an ongoing debate in psychology concerning its applications in the developing countries of the Southern hemisphere. On the one hand, there are the "universalists" of cross-cultural psychology (see, for example, Poortinga, 1993; Triandis, 1993), while on the other side there are the cultural psychologists, calling for the pluralism of "indigenous psychologies" (see, for example, Davidson, 1992; Misra & Gergen, 1993a, 1993b). One of the foundations for this debate is that generally psychology has not been successfully confronting the problems presented by the developing societies of the "Third World" (Carr

and MacLachlan, 1993a). We review research findings from several years of psychological research in Malawi, South East Africa, which we believe does confront one such problem.

This research has been motivated by a concern to improve systems of health service delivery within the context of very scarce resources (see House & Zimalirana, 1992). We have been investigating people's beliefs regarding cause, prevention and treatment of various ills, and the interrelationship (if any) between modern and traditional views. In this paper we wish to outline both the managerial and clinical implications of our findings. We will concentrate on which system(s) is/are acceptable to the consumers of health services, and whether a traditional perspective on healing can offer any advantages over more "modern" methods of health care.

The Findings

Malaria and schistosomiasis (bilharziosis) represent serious threats to the health of Malawians (Ager, 1993), as they do elsewhere in the tropics (e.g., Blanckaert, 1993) For example, a Ministry of Health survey conducted in Malawi in 1989 found that 76% of the sample reported having had at least one attack of malaria in the previous 12 months, while the disease is known to be one of the prime causes behind the high early death rate in the country (House and Zimalirana, 1992). Schistosomiasis is also a widespread affliction in Malawi, with nearly half of the entire population being infected at any one point of time (Alford, 1986).

What are Malawians' beliefs about these two diseases? Ager et al. (in press) surveyed a rural quota sample of 50 males and females ranging in age from five to over 50 years of age, using a structured interview which allowed for open-ended answers to questions on cause, risk reduction and treatment. The responses were then content analysed. Neither understanding of the cause of malaria or schistosomiasis, nor beliefs regarding prevention, were related to preferences for treatment; and the majority of individuals sought medical treatment for malaria and schistosomiasis, even though many of them attributed the cause and risk of infection to non-medical and (often non-material) factors.

It therefore appears that Malawians are able to tolerate a degree

of "inconsistency" between what they believe causes these serious illnesses and what they do to try and treat them. For example, traditional attributions about the cause of malaria included the victim being bewitched by jealous friends and colleagues. Such causes are understood to be mediated through the "social matrix," where some form of retribution is the force behind the victim's malaria. However, in the study by Ager et al. (in press) all subjects said that they would choose to treat malaria by medical means (for instance, taking the drug, Fansidar), rather than treat through the "social matrix" of having a traditional healer remove the spell which they believed had bewitched them. Thus a traditional cause and a modern (medical) treatment, acting through different modalities, can be seen to coexist in the "illness model" held by some people regarding malaria. It can be argued that a more logically consistent approach would be to explain cause, treatment and prevention through a single modal model (for example, either modern *or* traditional medical). It is this mixed-modal-model which we interpret as reflecting "tolerance", integrating differing ideas about illness.

A similar "tolerance" was also found with regard to people's beliefs about epilepsy, another prevalent problem in Africa (Billinghurst, 1987). Using Likert-type scale, Shàba et al. (in press) interviewed 56 males and 56 females concerning their beliefs about the cause, treatment and cure of epilepsy. There was no relation-ship between belief in medical causation and belief in traditional causation: in other words, belief in one did not exclude belief in the other. Individuals thus held traditional, non-medical beliefs about epilepsy alongside medical ones. Interestingly, people also viewed medical intervention as curative and traditional treatment as pallia-tive, since there was a clear link between belief in medical treatment and belief in a cure but no such relationship between belief in traditional treatment and belief in a cure.

Psychiatric disturbances are as prevalent in Africa as anywhere else (Reeler, 1991), yet they may be attributed to a wider variety of causes, including non-medical and non-psychological ones (Billinghurst, 1987; Kieve, 1964; Wilkinson, 1992). MacLachlan, Nyirenda and Nyando (in press) found that traditional attributions are the most common attributions made by patients in order to explain their own admission to Zomba Mental Hospital. However, they also report combinations of medical, psychological and traditional attributions. An explanation of admission to the hospital

given by a patient incorporated all the three types of attributions. He expressed: "I was working very hard and getting quite tired.... I had dizzy spells and my heart would jump and beat very fast.... Because of the success I had achieved, other people were jealous and they put a spell on me." This attribution highlights that hard work leads to tiredness (psychological aspect), cerebral and cardiac problems (medical aspect) and other people's use of witchcraft (traditional aspect).

Similarly MacLachlan, Banda, & McAuliffe (in press) report on various possible causes for a case of epidemic psychological disturbance at a Malawian girls' secondary school. Once again, rather than having just one simple causal explanation, pupils believed that there could be several coexisting causes including psychological, medical and traditional ones.

Pangani, Carr, MacLachlan and Ager (1993) reported on interviews with 100 Malawians from rural and urban areas. The interviews used Likert-type scales to rate various factors in terms of "modern" medical or psychological explanations, on the one hand, and traditional explanations, on the other hand. Once again, they found a "mixing" of modern and traditional beliefs. However, in this study they also investigated another type of "tolerance". Subjects were asked to indicate the extent to which they would accept another person who was mentally disturbed. The stronger was a person's belief in the traditional causes of mental disturbance, the more s/he accepted the other person, while the stronger was a person's belief in modern medical causes, the less accepting (tolerant) s/he was.

Synthesis

We believe that from these studies of the health and illness beliefs of Malawians a coherent picture is beginning to emerge. The samples which we have studied appear to show the ability not to simply dismiss one explanation of illness in preference for another and possibly contradictory explanation, but instead help one to entertain both traditional and modern ideas at the same time. This ability to tolerate both the complexity and possible contradictions inherent in these different views can be termed as "tolerance".

Nothing quite like it has been found in the psychology of Western cultures. On the contrary, the best known and most frequently researched theory in social psychology (i.e., cognitive dissonance theory) (see Wheeler, Deci, Reis, & Zuckerman, 1978) explicitly declares that people will not be able to tolerate opposing beliefs within themselves.

The hypothesised aversive state of knowing that one is being inconsistent is called "cognitive dissonance" ("knowing of inconsistency"), and it is claimed to be as powerful a motivator as hunger itself (Festinger, 1957). It is also claimed to trigger off the "dissonance reduction" process in which sufferers will seek to restore consistency by distorting one or more of their beliefs in order to fit the other(s). By this reasoning Westerners generally ought not to be able to live with the conflicting views in medical and traditional beliefs. According to the theory of cognitive dissonance, they would have to find a way of rejecting one philosophy or the other. However, in Malawi we have documented the coexistence of medical and traditional beliefs. Such coexistence has for some time been noted in other African countries (see for example Barbichon, 1968) and this has led us to call it "tropical" tolerance.

European researchers, who have noted the coexistence of traditional and modern beliefs have placed a particular—and we think rather negative—interpretation on their observations. They have tended to see such pluralism as something of a problem. Jahoda (1970) for instance studied the supernatural beliefs and changing attitudes of Ghanaian university students, investigating the implicit assumption that when Ghana (and Ghanaians) were fully "developed", then modern (Western) ideas would finally prevail. In fact, Jahoda (1970) describes a "partial return to traditional West African cosmological notions" (p. 126) after Western values had gained some popularity and acceptance. He therefore notes a state of "cognitive coexistence" between modern and traditional ideas in Ghana. Similarly, Peltzer (1987) interpreted the coexistence of traditional and medical beliefs in Malawi to be a reflection of the people in transition, again with the implicit assumption that modern (Western) beliefs will become increasingly popular with increasing "development".

However, we believe that the positive value of coexisting opposing beliefs has not been fully appreciated. We interpret the psychological phenomenon of tropical tolerance as bringing at

least one very distinctive advantage, in terms of practical applications to health care delivery in Malawi. We see tropical tolerance as a strong argument for cohabitation between "traditional" and "modern" forms of treatment and risk reduction. If modern and traditional beliefs about health and illness can sit comfortably in the mind of suffers, then there is no reason to exclude either traditional or modern approaches from the treatment of ailments. Indeed, it can be argued that to approach illness from only one of these perspectives is to fail to acknowledge the patient's psychology and understanding of her/his illness. If good treatment not only achieves health gains but also addresses the patient's concerns, then such treatment must incorporate the complexities of the patient's view of her/his own illness (Sarafino, 1990).

A further illustration of the possible therapeutic value of the tolerance finding comes from Zimbabwe. Elliot, Pitts, & McMaster (1992) surveyed the views about parasuicide held by nurses with varying degrees of nursing experience. Among those who were at the beginning and end of training, there was no (cor)relation between modern medical and traditional views. But the nurses with a decade of accumulated experience displayed a significant and positive correlation between the two belief structures.

This cohabitation is given a synergistic quality when described by Elliot, Pitts & McMaster as "the emotional maturity to use comfortably elements of both belief systems" (p. 278). Quite clearly, they interpret tolerance as a foundation for better care. Apart from such therapeutic cases, there is also an economic argument for applying tropical tolerance in health care. While Africa in general suffers great health problems, Malawi in particular has one of the poorest health records on the continent (Shaw and Elmendorf, 1993). It has been suggested that the incorporation of traditional medicine practitioners into health services may enable a greater proportion of people to be provided with health care (MacLachlan, 1993a, 1993b; Simukonda, 1994). The need is especially acute in Malawi where many qualified health professionals leave or fail to return to the country after training (*Southern African Economist*, 1993; MacLachlan and Carr, 1993). The integration of traditional healers into the health service would provide an extensive, extant network of community health practitioners. The tropical tolerance phenomenon implies that the presence of traditional healers in modern health services could be readily acceptable to

Malawians who have coexisting beliefs about medical and tradi-
tional aspects of illness. In a recent study on the role that traditional
healers might play in preventing the spread of HIV, we found that
while traditional healers were closely associated with the commu-
nity model of health delivery, medical doctors were disassociated
with a community role (MacLachlan and Carr, in press). We suggest
that including traditional healers in the clinical team could heighten
the community credibility of medical doctors and hence assist them
in their primary care efforts. The value of not only extending
medical care into the community, but also of learning from the
community in terms of how such care might be promoted, also
needs to be realised (MacLachlan, 1994) and traditional healers
would be an obvious vehicle for doing this.

Ramifications

We have already seen that tropical tolerance is to be found in
African countries other than Malawi (Barbichon, 1968; Jahoda,
1970). Further, it is reasonable to assume that the health services in
these other African countries will also be stretched, and probably
attempt to model themselves closely along modern (Western),
medical lines. In such cases, the tropical tolerance finding might
have extended applications. In Zimbabwe and South Africa tradi-
tional healers have been integrated into the hospital system since
some time, though not without a degree of hostility from medical
professionals (Munro, 1993). Oyarebu (1983) also reports on some
of the difficulties which traditional healers have had in being
accepted among Nigerian psychiatrists and psychologists.

It is possible to view tropical tolerance as a theoretical reorientation,
a new axis, from which productive new hypotheses may be derived
and then tested. For example, there is the question of whether
people (a) fail to experience any inconsistency (and do not therefore
experience dissonance), or (b) experience it but are not motivated
to remove it (i.e., do not "suffer" from it in any way). If the latter is
the case, then the integration of traditional healers into existing
health systems may contribute to sustainable solutions. In relation
to the former, dissociation is a fascinating possibility, but Jahoda
(1993) suggests that there might not necessarily be any internal

inconsistency. People may believe that medical causes (e.g., mosquito bites) are a necessary condition for actually becoming ill with malaria. Whether a mosquito bites a person or not may then be understood to be determined by spiritual factors or witchcraft. These differing interpretations deserve further investigation.

There is also the distinction between palliative versus curative functions, and the possibility of a kind of "division of labour" between the two types of healers—a question stemming from our finding that epilepsy in Malawi is seen to be cured by modern medicine and relieved by traditional medicine. This may be very useful information, given that in Malawi medical personnel and modern drugs are often in very short supply. To give another example, traditional healers may be seen to be able to provide palliative care to victims of AIDS. In such an event, there could be a very large role indeed for the traditional healer, at least in contexts where AIDS is as prevalent as it is in Malawi (see World Health Organisation, 1992). This "division of labour" hypothesis would also seem worthy of further empirical attention (MacLachlan and Carr, in press).

There is also the question of how far afield from the African continent is tolerance to be found. For instance, there is plenty of anecdotal evidence to suggest its existence in countries within the Asia-Pacific region, in China and Papua New Guinea for example (Carr, MacLachlan and Schultz, in press). If the health needs of these "developing" countries in some respects resemble those to be found in the African context, then again there would be applications to meeting the needs for improved health services. Indeed, the first systematic "charting" of levels of "tolerance" across the Asia-Pacific is already underway (Carr and MacLachlan, 1993b).

A further question is whether we are dealing with a "dissonance-tolerance" dichotomy, or a "cognitive dissonance-cognitive toler-ance" continuum. If the latter turns out to be the case, then there may be some applications of the phenomenon in "Western" contexts (although these may be more limited in scope if previous research on cognitive dissonance is relevant in health context). For example, the belief that AIDS is a medical disease sent by God to punish promiscuity exists in certain religious quarters in Western cultures (e.g. Carney et al., 1991). In such a case, there would seem to be some (albeit possibly circumscribed) applications of the tolerance concept even in the more industrially developed cultures

of the West. However, the tolerance which we have described in Malawi is, we believe, much more comprehensive than allowing for, say, Christian and medical explanations to coexist. In Malawi, Christian, modern medical and traditional explanations are often found to coexist. But it is the pervasiveness of traditional beliefs in infiltrating so many facets of life, which distinguishes them from holding Christian and medical beliefs simultaneously.

We believe that tropical tolerance is a psychological phenomenon which is neither universal nor particular to one culture—neither "etic" nor "emic". Tropical tolerance shows promise with regard to the wider provision of health services in Africa and beyond. We hope that tropical tolerance is the sort of finding which brings us one step closer to creating a health psychology of and for developing societies.

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