# Mild Cognitive Impairment
## *What's in a Name?*

Steven R. Sabat

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Corner and Bond (2006) raise a number of important conceptual issues related to the problems involved in defining mild cognitive impairment (MCI), differentiating it from normal aging, the definition of normal aging itself, and ethical issues surrounding the possible adverse effects of a diagnosis of MCI on the individuals thus described. It would seem that portentous ramifications are involved and that clarifying the conceptual issues would be of great value, not only to researchers but also to the ever-growing population of elderly people. In what follows, I address some of these issues further.

## Problems of Definition and Measurement

One of the problems that the authors discuss at the outset of their article concerns what methods are appropriate for detecting those with MCI: "Neuropsychological tests alone do not discriminate between normal aged-related memory loss and MCI or dementia and clinical judgment remains central to diagnosis" (Corner and Bond 2006, 5). Of course, to be able to discriminate between normal aged-related memory problems and MCI, we must first be able to define the former. What exactly is normal? As the authors correctly point out, the term has different meanings, one being normative (usual), another being nonpathologic. Is it normal (usual) for some sort of breakdown to occur in brain systems as a function of increased age? If so, is there a threshold age below which the very same physiologic breakdown is unusual? Would such a threshold age, if one existed, be the same for everyone, regardless of genotype and the cumulative interactive effects of nutrition, health, and stress-related factors over a period of decades? In effect, is some sort of memory impairment part of the natural (usual) process of aging for some people at particular ages rather than for others? And exactly what does it mean to be mildly impaired in the cognitive domain?

Hogan and McKeith (2001) presented a working group's definition characterizing MCI such that people who complain about memory problems and who also provide objective evidence of such problems, yet who simultaneously display "normal general cognitive function and intact activities of daily living" (Hogan and McKeith 2001, 1131), should be identified and followed. Here again, however, we confront the problem of defining "normal general cognitive function" as well as "normal activities of daily living." Can one have normal general cognitive function without normal memory function? If so, what exactly constitutes general cognitive function and on what conceptual or theoretical basis is such a definition valid? Furthermore, what sort of memory function are we talking about? Memory can be said to involve a number of stages: encoding, storage, and retrieval. Retrieval can be of the explicit type (conscious recall or recognition of specific information) with which people with Alzheimer's disease (AD) often reveal deficits or of the implicit type (a change in behavior as a result of previous experience of which the person may have no conscious recollection) as demonstrated in people with AD (Knopman and Nissen 1987). That is, people with AD can display deficits in explicit memory functions without similar deficits simultaneously in implicit memory functions.

A partial answer to the question about memory loss in MCI may be found in the use of the Mini-Mental State Examination (MMSE; Folstein, Folstein, and McHugh 1975), originally intended to be used as a screening device, but employed more and more frequently as an outcome measure to assess cognitive decline as well as the efficacy of drug treatments. Although the examination purports to test orientation, registration, attention, calculation, recall, language (naming, repeating, reading, writing, three-stage command), and construction, a task analysis reveals that the test is not quite as "global" in the cognitive domain as it is purported to be. For example, ten of the maximum thirty points on the examination are earned for "orientation" in time and place. Yet, all of the questions in this section of the test require intact recall of the relevant information. For example, if a person is asked, "What day of the week is this?" and replies "I don't know," the person loses one point. If, however, the person were then asked (using a multiple choice format that engages explicit retrieval via recognition), "Is it Saturday, Monday, Thursday, or Tuesday?" and if the person replied, "Thursday" and if the person were correct, does the person know what day it is? If the answer to this question is *yes*, and if the same results were obtained with the nine other questions (failure using recall but success using the recognition form of retrieval) in the orientation section, the person cannot be called disoriented. Yet, on the MMSE, the person would, in fact, be characterized as disoriented because the MMSE taps retrieval solely through recall and not through recognition. Repeating the names of three common objects (three points) in the registration section requires intact recall, as does the recall of the three objects a short time later (three points). Naming a watch and a pencil also requires that the subject recall the names of the objects (two points). One could argue that the three-stage command (three points) also requires recall of the same type that was employed in the registration section of the examination. Indeed, what exactly in the cognitive realm is it that differentiates recalling and immediately repeating the names of three objects in the registration item on the test from recalling and repeating "no ifs, ands, or buts" (one point) in the repeating item in the language section?

This admittedly rather brief analysis indicates that somewhere between eighteen and twenty-two out of the maximum thirty points on the MMSE are earned through the use of recall in one way or another. If the MMSE or similar standard tests are used to provide some arbitrary cutoff point that separates MCI from normal, is MCI truly a cognitive problem, is it a memory problem, or is it more accurately a problem with the mechanism of retrieval from memory called *recall*? It is the case that *recall* is not equivalent to *memory*, yet when people subjectively claim to have memory problems it is *recall* to which they are most often referring. If a person had what is principally a recall problem, then why would the diagnostic label be "mild *cognitive* impairment" when cognition involves far more than merely the ability to recall information from memory? I return to the social and personal ramifications of this issue.

With this in mind, we can appreciate the portentous meaning in what Corner and Bond (2006) almost understate in their article: that if the use of a cutoff point of twenty-five/twenty-six on the MMSE were the operational definition of MCI, and if this were applied to the general population (as in the MRC Cognitive Function and Ageing Study), the majority of the population over the age of eighty-two would be so diagnosed. Depending on the size of this majority, we might have an insight into what is normal in the sense of usual in the process of aging. The issue is compounded further by the results of a study (White et al. 2002) in which the MMSE was administered during annual health examinations to people over the age of seventy-five. Of the 709 people screened, 286 scored below twenty-six (out of thirty) and were invited back for further assessment. Eighty-four declined the invitation, but of the remaining 202, 173 were found not to have dementia and twenty-nine were diagnosed as having dementia. Thus, because there was a false-positive rate of eighty-six percent, the authors found reason for concern regarding the use of the MMSE as a screening instrument in primary care. We are left, however, not knowing what became of the eighty-four people who declined further evaluation and one must wonder about the ways in which their MMSE score affected their understanding of their condition and their expectations for the future. One might likewise wonder what transpired in the lives of the 173 between the time of their initial and follow-up evaluations.

Finally, in terms of the issues related to the measurement of whatever it is that MCI might be, there is the reliance on self-reports in the screening methods as described by the authors. As Corner and Bond (2006) correctly point out, there is a need for enhanced understanding of how aging affects the accuracy of self-reports and how the form of the questions that are asked of aged people can affect the answers researchers obtain. There are various types of self-reports, some of which may be incorrigible. That is to say, if persons claim that they feel as if they are not functioning as well as they should function or have functioned, that report itself cannot be denied by the testimony of anyone else. In other words, to say and mean, "I am not as mentally sharp as I used to be," cannot be negated by the testimony of any other person, for it is a statement about the person's private experience. Even if the person in question is given standard tests and the results place the person in the "normal range" for persons of similar age and educational background, the epistemic status of the person's sincere report of private experience cannot be denied. Then, too, there may not be established norms for elderly people who have earned advanced degrees; so, understanding the meaning of their testimony in relation to their test scores may be difficult.

## LABELING AND PSYCHOSOCIAL PROBLEMS REGARDING SELFHOOD

How we interpret the meaning of such things as problems with explicit recall of recent events can have, as the authors correctly point out, significant and far-reaching psychological effects on persons on an individual level as well as within their larger social world. Being diagnosed with a mental disorder called MCI can have very different psychosocial effects than being considered "somewhat forgetful" or "having recall problems"; MCI is a "disease" or "medical" entity that is often related to dementia. The authors correctly point out that a label such as MCI can contribute to what Goffman (1968) called a *spoiled identity*. We can appreciate the meaning and predicament of having a spoiled identity more keenly, I think, by using aspects of social construction theory (Harré 1991) and positioning theory (Harré and van Langenhove 1992, 1999) to elucidate the dynamics involved in creating this spoiled identity. In the tripartite social constructionist approach, two aspects of selfhood can be particularly affected by a diagnosis of MCI. The first is called *Self* 2 and this is the sum total of a person's mental and physical attributes, past and present. Mental attributes might include one's beliefs (political, social, religious, and the like), one's sense of humor, facility with mathematics or language, one's education and degrees earned, and one's beliefs about one's attributes. For example, there are some attributes in which one may take pride (one's professional or athletic abilities and accomplishments), and others about which one is embarrassed or harbors other negative reactions (e.g., procrastinating). Most individuals prefer to be seen in a positive light by others (James 1890/1983) and try to avoid situations in which attention is called to their foibles or what they consider to be their negative attributes; the latter situations are potentially embarrassing, perhaps even humiliating. If, for example, a person were to be diagnosed with MCI, the diagnosis would then become one of his or her attributes, part of the person's Self 2. And from the first case study discussed by Corner and Bond (2006), we see quite blatantly the negative reactions reported by Ron and Rose when they were informed that Rose had "some sort of dementia" that might or might not be, in her words, "normal for someone my age" (Corner and Bond 2006, 7). As Ron said, "Our world came crashing down around us and . . . we cried for days . . . it was too shameful for Rose" (Corner and Bond 2006, 7).

Now, if this rather negatively viewed attribute—being diagnosed with MCI—becomes more and more the focal point of one's own attention and that of others, it is not difficult to see how one can become deeply depressed. As Seligman (1975) has pointed out, this sort of depression, stemming from a situation in which there is nothing the person can do, leads to what is called *learned helplessness*. There is the further suggestion that learned helplessness is realized pathophysiologically in the immune system. Furthermore, as proposed by Kitwood (1990), depression and apathy are important aspects of the "dementing" process, so that in principle it is possible that some people diagnosed with MCI may develop more serious problems as a result of their reaction to the diagnosis. As Corner and Bond noted about Ron and Rose, "They felt that the tests they were given to complete made Rose 'feel a failure' and damaged her self-esteem and her confidence in carrying out every day activities" (Corner and Bond 2006, 8). She participated markedly less in social activities as a result of anticipating the negative feelings of friends and family. This was the case even though, as Ron said, "We were told that the dementia was very mild, not really dementia. And it was implied that there wasn't that much to worry about" (Corner and Bond 2006, 8). Yet, from the point of view of Ron and Rose, there was a great deal to worry about, not only in terms of the future, but also in terms of the present: "We've just been turned upside down by it . . . you picture these people who are vegetable . . . it's horrific" (Corner and Bond 2006, 8). Here we begin to appreciate what Corner and Bond mention as the cultural representations of aging and of dementia.

If Rose's diagnosis of MCI comes to be an increasingly dominant focus of attention, it is possible that many of Rose's intact, even admirable, attributes will be negatively affected, or perhaps rendered invisible. As Rose commented, "I was always good at maths and that in school. I came in the top percent . . . but it threw me those tests. I felt such a . . . failure and it really knocked me" (Corner and Bond 2006, 8). From the case report, it is unclear as to whether Rose's less-than-optimal performance on tests was due to her anxiety about the situation she was in or due to some impairment that had nothing to do with situational factors at the time she took the tests. That her problems began around the time her sister died might shed some light on the importance of situational factors. Such are some of the ways in which Self 2 can be spoiled as a result of being diagnosed with what was described as early stage or mild dementia (or MCI). Another aspect of selfhood that can be spoiled by a diagnosis of MCI is one's social identity, and that is the focus of the following section.

## "SPOILED" SOCIAL IDENTITY

The third aspect of selfhood according to social constructionist theory is the social identity of the person (Self 3). One can have a multitude of social identities, or personae, each of which involves a specific pattern of behavior that is different from that of one's other social identities. The patterns of behavior involved in being a devoted, loving spouse are different from those involved in being a research collaborator, a loyal friend, a deferential child to one's parents, a demanding teacher, or a supportive and loving parent, to name but a few. In each case, however, to construct a particular social identity or persona, one must enjoy the cooperation of at least one other person. One cannot construct the social identity of a loving, supportive parent if one's child does not recognize him or her as being a parent.

In the case of Ron and Rose, it is clear that the diagnosis of MCI had a powerful effect. Rose withdrew from social activities, anticipating (rightly or wrongly) a negative reaction from friends and family if they knew of her diagnosis. In this instance, her ability to construct a social identity of friend to others was compromised by her own withdrawal such that she could not gain the necessary cooperation from others. Although Corner and Bond are correct in saying that this situation is an example of how people's beliefs about dementia before a diagnosis can have an impact on how they react after receiving such a diagnosis, two further points must be made. First, in this case it was not at all clear to Rose and Ron that Rose had, in fact, received a diagnosis of MCI: "We were told that the dementia was very mild, not really dementia" (Corner and Bond 2006, 8). Even if Ron's words do not match what the couple was actually told, it is clear that there was some miscommunication or misunderstanding involved. It is possible that, to some indeterminate degree, the misunderstanding was in part due to MCI not being clearly defined in the first place.

A second point concerns Rose's fear that others would have a negative reaction to the fact that she had been diagnosed with some form, perhaps, of dementia. Her fear was not unfounded at all. Kitwood and Bredin (1992) and Kitwood (1998) have called attention to the innocent ways in which healthy others contribute to the difficulties faced by people with dementia, calling such treatment *malignant social psychology,* which constitutes assaults on that person's feelings of self-worth, ultimately resulting in the depersonalization of the individual with dementia. Included in the category of malignant social psychology are "stigmatization" and "banishment." *Stigmatization* is the exclusion of the person with dementia such that he or she becomes an outcast of sorts, with friends and relatives slowly ceasing to visit. *Banishment* is seen in cases in which others avoid the afflicted person, who is viewed as being "confused." These patterns of behavior, along with other aspects of malignant social psychology, are seen all too often in cases of people with AD (Sabat, 2001), wherein we discover that (1) the person with AD is seen more and more in light of the Self 2 attribute of the diagnosis and the defects present in the person's abilities and (2) this contributes to the social identity of the person becoming more and more limited to "dysfunctional, burdensome, patient." As a result, it becomes increasingly difficult for the person with AD to gain the necessary cooperation of others in constructing healthy, valued social identities. Although it remains to be seen exactly if and how the diagnosis of MCI can lead to the same problems regarding one's social identity, it is clear that given the extant stigmatic cultural representations of dementia, it is not far-fetched to assume that there is a clear and present danger of the very same social dynamic, or some version of it, occurring. That is to say, the person diagnosed with MCI is now seen as "the mildly defective patient" who may become more and more of a "burdensome patient" in time. It is precisely in this way that the person's social identity may become spoiled, for the person is then positioned in malignant, or negative, ways by others.

Interestingly, Bond and Corner (2001) point out that there is a history of people with cognitive impairment being "excluded or marginalized in health and clinical research because of traditional assumptions about the ability or appropriateness of people with cognitive impairment to act as 'reliable' respondents" (p. 95). Thus, we see that even "experts" who engage in research on cognitive impairment have been affected by the stigmatic cultural representations of dementia such that the people with dementia are routinely assumed to be unable to provide information that might be valuable in developing an enhanced understanding of cognitive impairment. In such cases, people with dementia are (1) assumed in advance to be unable or incapable of providing any help or insight, thereby restricting ("spoiling") their social identities even further and/or (2) it is assumed that the deficits appearing through the use of standard clinical testing are definitive of the person's entire range of cognitive ability in the natural social world. Although it may be the case that some people with dementia cannot serve as respondents, it would be incorrect to make either of these assumptions about all people with dementia solely on the basis of the diagnosis (Sabat 2001, 2003).

It seems that, if MCI is a vague, ill-defined term, it would behoove researchers to sharpen the definition so as to be able to convey more precisely the nature of the difficulties that people experience as they grow older. *Memory loss*, for example, should not be equated with something called *mild cognitive impairment* when cognitive impairment is a much broader, less specific term. Indeed, the definition of *memory loss* should be sharpened to convey exactly what sort of memory problems people experience. If, for example, a person has problems with explicit recall of information but not explicit recognition of the same information or a variety of implicit memory abilities, then *memory loss* should not be employed; not only it is inaccurate, but it might also have possibly wide-ranging untoward effects on the person him- or herself. It is one thing to tell a person that he or she has MCI, or memory loss, but quite another to tell a person that he or she has a difficulty with retrieval via recall, but intact recognition memory, for example. In this sort of situation, the person would be given information not only about what is amiss, but also about the aspects of his or her retrieval abilities that are still functioning well, so that less is left to the imagination.

One of the questions that Corner and Bond pose toward the conclusion of their article is, How do the views of people with MCI differ from cognitively intact older adults or people with dementia? (Corner and Bond 2006). The question makes two assumptions: First, that there is such a thing as MCI, and second, that the views of people so diagnosed might be different from those of others. Perhaps this important question might be posed in an alternative way: Do the views of people diagnosed with MCI differ from those of others and if so, in what ways? Given that the authors present important questions about the vagueness of the diagnostic term and its possible malignant ramifications, it might be worthwhile not to assume, at this point, its existence as a well-defined entity when we might well consider sharpening its description: What makes MCI "mild"? What exactly are the cognitive functions that are impaired and by what measure(s) are they thought to be impaired? Perhaps it is important that we step back a bit and examine these issues anew for reasons so well stated by Corner and Bond (2006).

At this point, it might be worthwhile to explore the relationship between what might be considered cognitive impairment and the negative cultural/social stereotypes about aging, for they too may have a profound effect.

## THE IMPACT OF STEREOTYPE THREAT

At the outset of their article, Corner and Bond (2006) note that cultural representations of the aging process are largely negative. Thus, the setting (both the larger societal backdrop and the clinic itself) within which people are screened for cognitive impairment is one that may provoke anxiety and thereby affect how older individuals respond to the screening process and the results that follow in its wake. It might be worthwhile, therefore, to explore briefly the relationship between what might be considered cognitive impairment and the extant negative cultural/social stereotypes about aging. There is a growing literature that indicates that acceptance of stereotypes about aging and deficits in memory function could lead older people to perform more poorly in situations that emphasize testing of memory or memory problems (Levy 1996; Rahhal, Hasher, and Colcombe 2001).

Among the contextual factors that might have a negative influence on the performance of elderly people on a variety of cognitive tasks is what Steele (1997) and Steele and Aronson (1995) refer to as the "stereotype threat." The authors propose that the presence of negative stereotypes about a group can have an adverse impact on the performance of individual group members if they are placed in a position in which they might confirm the stereotype. The stereotype threat would be greatest for those who placed the most value on the trait being stereotyped (Leyens, Désert, Croizet, and Darcis 2000; Stone, Lynch, Sjomeling, and Darley 1999). According to Wheeler and Petty (2001), it is likely that the stereotyped treatment that older adults encounter in daily life can heighten their awareness of those age-related beliefs and the fact that they are members of the group being stereotyped in negative ways. With this as background, Hess, Auman, Colcombe, and Rahhal (2003) have addressed the issue of how the belief that aging has a negative impact on memory function can have an impact on performance of memory tasks involving recall. The authors point out that feeling threatened does not automatically follow when one is simply aware of the existence of a negative stereotype. Rather, it should most likely occur when people are placed in a situation in which (1) they become aware of the implications of their membership in a group that is stereotyped negatively, and (2) they are asked to perform a task that is, in one or another way, "diagnostic" of the negatively stereotyped ability and they value that same ability.

In a series of experiments, the authors found that (1) performance was most negatively affected under conditions in which older adults were exposed to the stereotype threat and when they "had some personal investment in their memory skills" (Hess et al. 2003, 9) which, in these experiments, involved recall functions; (2) the impact of threat-related factors was minimized when the participants were given information that indicated that memory decline was not inevitable, that coping strategies can be effective; that is, performance was facilitated when participants felt less threatened; (3) assessments of memory ability can be affected by the extent to which the stereotype threat is cued by the circumstances surrounding laboratory based testing of older people; and (4) the stereotype threat has a negative impact on older persons' ability to use strategies that would aid them in the process of recalling information. On the basis of these findings, the authors argue that there is great potential for situational factors "to skew research findings and lead to inaccurate conclusions about older adults' abilities and associated age differences in performance" (Hess et al. 2003, 10).

As Corner and Bond (2006) note, Ron and Rose reported that their experience of going to a memory clinic was quite negative because of the presence of people with problems far more severe than Rose's. This situation could, according to the aforementioned researchers, have served as a cue for the stereotype threat. It may be surmised, at least provisionally, on the basis of these findings that when other older people are brought to memory clinics, as were Rose and Ron, they too may be exposed to a significant degree of stereotype threat and that their performance on standard tests may well be adversely affected. Indeed, if the results of such tests lead to a diagnosis of MCI, the diagnosis itself may trigger a profound degree of stereotype threat and negatively affect subsequent behavior much as we saw in the case study presented. It is, therefore, of signal importance to consider more fully the effects of environmental factors that affect aging and memory beyond the presumed physiologic changes that accompany aging. The possible untoward ramifications regarding the selfhood and quality of life of individuals thus labeled can be portentous and so the need for caution is great, as is the need for clarity regarding the exact definition of MCI. Corner and Bond (2006) provide a compelling argument in this regard and it is surely worthy of the attention of researchers, practitioners, philosophers, and ethicists for there is, apparently, a great deal in the name "mild cognitive impairment," perhaps because its exact defining characteristics will remain defeasible.

## REFERENCES

Bond, J., and L. Corner. 2001. Researching dementia: Are there unique methodological challenges for health services research? *Ageing and Society* 21:95–116.

Corner, L., and J. Bond. 2006. The impact of the label of mild cognitive impairment on the individual's sense of self. *Philosophy, Psychiatry, & Psychology* 13, no. 1, 3–12.

Folstein, M. F., S. E. Folstein, and P. R. McHugh. 1975. Mini-mental state: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research* 12:189–198.

Goffman, E. 1968. *Stigma: Notes on the management of spoiled identity.* Harmondsworth: Penguin Books.

Harré, R. 1991. The discursive production of selves. *Theory and Psychology* 1:51–63.

Harré, R., and L. van Langenhove. 1992. Varieties of positioning. *Journal for the Theory of Social Behavior* 20:393–407.

———. 1999. *Positioning theory.* Oxford: Blackwell.

Hess, T. M., C. Auman, S. J. Colcombe, and T. A. Rahhal. 2003. The impact of stereotype threat on age differences in memory performance. *Journal of Gerontology: Psychological Sciences*, 55B: P3–P11.

Hogan, D. B., and I. G. McKeith. 2001. Of MCI and dementia: Improving diagnosis and treatment. *Neurology* 56:1131–1132.

James, W. 1890/1983. *The principles of psychology.* Cambridge, MA: Harvard University Press.

Kitwood, T. 1990. The dialectics of dementia: With particular reference to Alzheimer's disease. *Ageing and Society* 10:177–196.

———. 1998. Toward a theory of dementia care: ethics and interaction. *The Journal of Clinical Ethics* 9:23–34.

Kitwood, T., and K. Bredin. 1992. Towards a theory of dementia care: Personhood and well being. *Ageing and Society* 12:269–287.

Knopman, D. S., and M. J. Nissen. 1987. Implicit learning in patients with probable Alzheimer's disease. *Neurology* 37:784–788.

Levy, B. 1996. Improving memory in old age through implicit self-stereotyping. *Journal of Personality and Social Psychology* 71:1092–1107.

Leyens, J., M. Désert, J. Croizet, and C. Darcis. 2000: Stereotype threat: Are lower status and history of stigmatization preconditions of stereotype threat? *Personality and Social Psychology Bulletin* 26:1189–1199.

Rahhal, T.A., L. Hasher, and S. J. Colcombe. 2001. Instructional manipulations and age differences in memory: Now you see them, now you don't. *Psychology and Aging* 16:697–706.

Sabat, S. R. 2001. *The experience of Alzheimer's disease: Life through a tangled veil.* Oxford: Blackwell.

———. 2003. Some potential benefits of creating research partnerships with people with Alzheimer's disease. *Research Policy and Planning* 21, no. 2:5–12.

Seligman, M. 1975. *Helplessness: On depression, development, and death.* San Francisco: Freeman.

Steele, C. M. 1997. A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist* 52:613–629.

Steele, C. M., and J. Aronson. 1995. Contending with a stereotype: African-American intellectual test performance and stereotype threat. *Journal of Personality and Social Psychology* 69:797–811.

Stone, J., C. I. Lynch, M. Sjomeling, and J. M. Darley. 1999. Stereotype threat effects on Black and White athletic performance. *Journal of Personality and Social Psychology* 77:1213–1227.

Wheeler, S. C., and R. E. Petty. 2001. The effects of stereotype activation on behavior: A review of possible mechanisms. *Psychological Bulletin* 127:797–826.

White, N., A. Scott, R. T. Woods, G. C. Wenger, J. D. Keady, and D. Manikkarasa. 2002. The limited utility of the Mini-Mental State Examination in screening people over the age of 75 for dementia in primary care. *British Journal of General Practice* 52:1002–1003.

tion of the moral basis of profit when disease is defined as a market opportunity; a book is near completion. She held an endowed Research Chair in Medical Anthropology at the University of British Columbia (1998-2002), a Canadian Institutes of Health Research New Investigator award (1999-2002), and a postdoctoral fellowship in geriatric medicine and neuroepidemiology. Her current research unpacks safety and efficacy in regulatory practices and policies. She currently holds the Canada Research Chair in Bioethics in the Faculty of Medicine at Dalhousie University in Halifax, Canada. She can be contacted by e-mail at Janice.Graham@dal.ca.

ANDY HAMILTON is a lecturer in Philosophy at Durham University who works in the areas of philosophy of mind and aesthetics. His recent work includes two forthcoming monographs, "Exploring Self-Consciousness" and "Aesthetics and Music" (Continuum). He can be contacted by e-mail at a.j.hamilton@dur.ac.uk.

DR. JULIAN C. HUGHES is a consultant in old-age psychiatry and an honorary clinical senior lecturer at the Institute for Ageing and Health in the University of Newcastle. He currently chairs the Philosophy Special Interest Group of the Royal College of Psychiatrists. Recent edited volumes include *Palliative Care in Severe Dementia* (Quay Books, 2005) and (with Stephen Louw and Steven Sabat) *Dementia: Mind, Meaning, and the Person* (Oxford University Press, 2006); with a jointly authored book (with Clive Baldwin) entitled *Ethical Issues in Dementia Care: Making Difficult Decisions* (Jessica Kingsley, 2006). He can be contacted by e-mail at *j.c.hughes@ncl.ac.uk.*

THOMAS B. L. KIRKWOOD is Professor of Medicine and Co-Director of the Institute for Ageing and Health at the University of Newcastle. Educated in biology and mathematics at Cambridge and Oxford, he worked at the National Institute for Medical Research in London, until in 1993 he became Professor of Biological Gerontology at the University of Manchester. His research is focused on the basic science of ageing. His books include the award-winning *Time of Our Lives: The Science of Human Ageing, Chance, Development and Ageing* (with Caleb Finch) and *The End of Age* based on his BBC Reith Lectures in 2001. He can be contacted by e-mail at tom.kirkwood@ncl.ac.uk.

RON PETERSEN, Ph.D., M.D. is the Cora Kanow Professor of Alzheimer's Disease Research, Director of the Mayo Alzheimer's Disease Research Center, and Professor of Neurology at the Mayo Clinic College of Medicine. He is a past recipient of the MetLife Award for Medical Research in Alzheimer's Disease and the Potamkin Prize for Research in Pick's, Alzheimer's, and Related Disorders of the American Academy of Neurology. Dr. Petersen has edited three books including *Memory Disorders, Mayo Clinic on Alzheimer's Disease,* and *Mild Cognitive Impairment: Aging to Alzheimer's Disease.* His current research interests include aging, mild cognitive impairment and Alzheimer's disease. He can be contacted by e-mail at peter8@mayo.edu.

DR. KAREN RITCHIE is a neuropsychologist and epidemiologist. She is currently a Research Director with the French National Institute of Medical Research (INSERM), and directs Research Unit E361 (Epidemiology and Clinical Research into Nervous System Pathologies). She is a member of the Advisory Council of the Director General of INSERM (CORES), the Professorial Board of the University of Montpellier, the Board of Directors of the International Psychogeriatric Association, and the European Institute of Women's Health, and a member of the editorial boards of several journals. She is also a consultant to the Mental Health Department of the World Health Organisation and co-president of the WHO-NIH International Workgroup on Behavioural Disorders. She can be contacted by e-mail at ritchie@montp.inserm.fr; http://e361.montp.inserm.fr.

STEVEN R. SABAT is Professor of Psychology at Georgetown University and has examined the remaining intact cognitive and social abilities of people with Alzheimer's disease, the subjective experience of having the disease, how communication between the afflicted and their caregivers may be enhanced, and the epistemological basis of our understanding of the effects of brain injury. He has explored these issues in scientific journal articles, in *The Experience of Alzheimer's Disease: Life Through a Tangled Veil* (Blackwell 2001) and in *Dementia: Mind, Meaning, and the Person*, co-edited with Julian C. Hughes and Stephen J. Louw (Oxford University Press 2006). He can be contacted by e-mail at sabats@Georgetown.edu.

TIM THORNTON is Professor of Philosophy and Mental Health, University of Central Lancashire. He is co-author (with Bill Fulford) of the *Oxford Textbook of Philosophy and Psychiatry* (2005) and author of *Wittgenstein on Language and Thought* (1998) and *John McDowell* (2004) as well as a number of papers on philosophy and mental health. He can be contacted by e-mail at tthornton1@uclan.ac.uk.

DR. STEPHEN TICEHURST is Clinical Director of Specialist Mental Health Services for Older People, Hunter New England Health, NSW, Australia. While mainly working as a full time clinician, he has maintained an interest in philosophical and ethical aspects of psychogeriatrics, especially in relation to dementia. To this end, he completed a Masters at Warwick in the Philosophy and Ethics of Mental Health. He has published in the areas of alcohol and the elderly, deliberate self-poisoning, capacity assessment, and the psychosocial consequences of earthquake. He can be contacted by e-mail at mdsbt@mail.newcastle.edu.au.

PETER J. WHITEHOUSE, M.D., Ph.D., is Director of the Office of Integrative Studies, Department of Neurology at Case Western Reserve University as well as Professor of Neurology, Psychiatry, Neuroscience, Psychology, Nursing, Organizational Behavior, Cognitive Science, and History. He is a geriatric neurologist, clinical cognitive neuroscientist, and "global" bioethicist. His integrative clinical practice is built around the power of stories to assist those with aging associated cognitive challenges. His main interest is developing innovative clinical and learning environments to promote individual and collective health and wisdom. His forthcoming book (with Danny George) is entitled *The End of Alzheimer's: Writing Your Own Prescription for Brain Aging*. He can be contacted by e-mail at peter.whitehouse@case.edu.