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Rethinking the Study of Gender and Mental Health

Abstract

Gender differences in mental health status and their social determinants have drawn considerable attention in the sociology of mental health. This paper synthesizes empirical findings concerning this subject, and discusses gaps remaining in the literature. More efforts are recommended in regards to attentive examinations of (1) dynamic social contexts, (2) dissimilarities among groups in different social locations, and (3) individuals' interpretations of their distress experiences. In other words, I argue that a study of gender and mental health should not limit its investigation to gender comparison, but extend its exploration to the complexity of social and emotional lives. To achieve this goal, I propose a diamond-shaped model that highlights both structural (social and cultural) and individual (biomedical and psychological) aspects of mental health. This model suggests that sociologists focus on intersectional diversity (such as gender, class, and ethnicity), the cultural meanings of individuals' social and emotional lives shaped by their standpoints, the interplay of these structural factors, and its impact on psychological well-being.

Keywords: gender; mental health; social context, social location; culture; feminist perspective.

1. Introduction

Mental health is gendered. One of the most consistent findings in the study of mental health is that women have higher rates of depression and psychological treatment than men do (Aneshensel 1992, Caldwell, Pearson, and Chin 1987, Dohrenwend and Dohrenwend 1974, 1976, Gove 1972, 1987, Mirowsky and Ross 1986, Rosenfield 1989). The association between gender and mental health therefore has become a prominent topic not only in sociology but also in the fields of psychology, epidemiology, and public health. Sociologists have produced abundant empirical studies concerning gender differences in mental health status and their social determinants. Nevertheless, the

literature lacks a synthesis of major findings and a reflection on the current development of this area. This paper aims to fill these gaps.

In this article, I start by synthesizing empirical findings concerning gender differences in mental health and their social determinants in sociological studies. Next, I discuss inadequacies remaining in this subject of investigation. I provide a general discussion on the gaps in the literature, and synthesize feminist critiques of mental health research that primarily concern the omission of women's standpoints. Following this discussion, I introduce key concepts in the political economy of health and anthropology that can be applied to fill the gaps, and then suggest a new framework for the study of gender and mental health based on the integration of insights from different approaches.

2. Methods

I searched a great number of electronic databases, journals, and books to explore the literature on gender and mental health. First, I searched electronic databases, such as Sociological Abstract, PsycINFO, ProQuest, and Jstor, by setting "gender and mental health," "gender and mental," "gender and distress," and "women and mental health" in titles or keywords. Second, articles and references in textbooks on mental health, such as *Handbook of the Sociology of Mental Health* (edited by Aneshensel and Phelan 1999) and *A Handbook for the Study of Mental Health* (edited by Horwitz and Scheid 1999), were also used for reviewing the literature. Third, several journals in health areas, such as *Sociology of Health and Illness*, *Journal of Health and Social Behavior*, *Social Science and Medicine*, *Women and Health*, and *Culture, Medicine, and Psychiatry* were either browsed in electronic databases or hand-searched. Finally, the bibliography in each item found in the above searches was also browsed for relevant references.

3. Gender Differences in Mental Health and Their Determinants: The Sociological Tradition

Gender differences in mental health status have been the subject of scholarly debates. Nevertheless, a great number of studies in social psychological research support the finding that women are more likely than men to be mentally ill (Aneshensel 1992, Caldwell, Pearson, and Chin 1987, Dohrenwend and Dohrenwend 1974, Gove 1972, 1987, Gove and Tudor 1973, Mirowsky and Ross 1986). For example, Gove and Tudor (1973) find that women uniformly have higher rates of psychiatric treatment in mental hospitals, inpatient psychiatric treatment in general hospitals, and outpatient care in psychiatric clinics than men. Aneshensel (1992) and Mirowsky and Ross (1986) also find that, in relation to men, women report higher average levels of depression and anxiety. Several studies, (e.g., McGrath et al. 1990, Bebbington 1996, Nolen-Hoeksema 1990, Ussher 1991) also identify depression as a problem that afflicts women particularly.

Why do women outnumber men in the population that has mental problems? To investigate this subject, sociologists adopt mainly two approaches. One examines gender differences in personal characteristics (such as vulnerability, personality traits, self-concepts, coping strategies and available resources) and their effects on mental health. The second stresses the structural factors that produce gender inequality in society, and treats such forces as a major cause of the elevated status of one sex's rate of mental illness relative to the other's. Family structure, employment status, housework load, multiple roles, and poverty exemplify these structural factors. Because of sociologists' primary interest in understanding the structural factors of social problems, such as gendered distress, the second approach makes up most studies concerning this subject. Below, I synthesize some of the major findings of these two approaches.

Gender Differences in Personal Characteristics as the Causes of Gendered Distress

Adopting the first approach, for instance, Newman (1986) and Thoits (1986) attribute the causes of gender differences in mental health to the differential vulnerability and responsiveness of men and women. Both of their studies provide evidence that women

are more vulnerable than men to psychological distress and depression. In another study, Zukerman (1989: 442-443) finds that women have less confidence, self-esteem, self-sufficiency or coping ability, and public speaking/leadership abilities than men, leading to the greater number of reports that attributes symptoms of depression, anxiety, and anger to women when under stress. Moreover, Turner and Marino (1998) report that higher levels of social support are related to lower levels of distress among both men and women. Women, however, exhibit more positive social support as well as more depressive symptoms and distress than their male counterparts.

Structural Factors of Gender Inequality as the Causes of Gendered Distress

The second approach, the so-called "social causation model," treats social structures and social relations as the major determinants of mental health. Family structure (including parenthood and marital status) and employment are two of the most frequently examined variables in this approach. According to Broman (1991), in general, married people have greater levels of psychological well-being than the non-married, but married women have higher rates of mental illness than married men and single women. In addition, amount of housework and number of children are two major family conditions that have an important negative influence on married women's mental health (Lennon and Rosenfield 1992). Husbands' support and sharing of responsibilities for childcare and housework help reduce married women's risk of mental illness, especially for employed women with multiple roles (Dennerstein 1995). However, the sharing of domestic work has been found to increase a husband's degree of depressive symptoms (Glass and Fujimoto 1994).

A few studies have discussed the influence of family structure on African Americans' mental distress and the gender differences that emerge as a result of this influence, although the findings remain inconsistent (Ball and Robbins 1986, Reskin and Coverman 1985, Zollar and Williams 1987). Broman (1991) argues that African Americans' family structure is different from that of White families, a factor that is often overlooked in discussions of family stress. In Asian families, it is believed that close family ties provide important support for dealing with psychological problems (Sue and Morishima 1982, Uba 1994). Wolf (1997) finds, however, that the strong family ideology

pervading Filipino families imposes patriarchal power on young girls and causes serious mental problems.

As for the association between employment and mental health, women's participation in the paid labor force has been found to be an important contributor to their general psychological well-being (Bernard 1984, Dennerstein 1995, Glass and Fujimoto 1994). However, in comparisons of employed women with housewives and men, the reliability of this contention requires reservation because the empirical data have been quite inconsistent. Some studies find that although employed women have lower levels of distress than housewives, the two groups of women are more distressed than employed men (Radloff 1975). Others find no difference between employed women and housewives (Cleary and Mechanic 1983, Pearlin 1975). Still others find that employed women do not differ from employed men in levels of distress (Gore and Mangione 1983, Kessler and McRae 1982).

To examine further the conditions under which employment contributes to or constrains women's mental health, some researchers have investigated various control variables that theoretically modify this association. Their findings illustrate that job control, autonomy, and complexity enhance employed women's psychological well-being (Hall 1989, Lennon and Rosenfield 1992, Pugliesi 1992, Rosenfield 1989). Employment also has interaction effects with family structure on women's mental health. Working for pay buffers women's marital stress, whereas parenting has a negative and exacerbating effect on work-related stress (Kandel et al. 1985). Such interaction effects between women's paid work and unpaid housework are generally addressed in the literature as an issue that concerns how women's multiple roles influence their mental health. Empirical research does provide evidence that certain sets of multiple roles are beneficial for women's psychological well-being (Thoits 1983, Pugliesi 1992). Nevertheless, the consequences of multiple role obligations are not uniformly positive. While women who engage in paid work in most cases still perform the vast majority of domestic work, multiple roles for them could lead to extra burdens and consequently cause higher rates of distress and depression as compared to employed married men and employed single women (Cleary and Mechanic 1983, Pugliesi 1992). In particular, employed married

women with young children experience higher levels of distress than their childless counterparts or comparable men (Cleary and Mechanic 1983, Thoits 1986).

4. Inadequacies in the Literature

As noted above, empirical research has established abundant sociological knowledge about gender and mental health. Nevertheless, some gaps remain in the literature. I first discuss these gaps from a sociological perspective and then synthesize feminist critiques on mental health research.

General Discussion

First, social contexts have been ignored to a large extent in sociological studies of mental health (Hall 1989). Mental health studies tend to be empirical examinations of specific variables. This tendency often overlooks the social contexts and the larger societal structure within which the social experience of mental distress is produced. Although a few sociologists have attempted to consider social context and structure in mental health research (e.g., Broman 1991, Wolf 1997), the dynamic social context of emotional life remains ignored in the literature. For instance, we know that marital status affects men's and women's mental health differently, but studies investigating this issue have rarely provided explanations concerning *why* and *how*. In other words, in the literature, we often obtain the information in such a way that when an association, or a specific direction of association, exists between two variables, we hardly know the dynamic context that produces this association. The major research method of the sociology of mental health – large-scale surveys – might make this goal difficult because quantitative approaches are not designed for the capture of dynamic contexts surrounding the inquiry. In a study of Filipino families, Wolf (1997) provides some evidence that a qualitative approach can help contextualize the social dynamics of emotional life, which are what quantitative measurements fail to reveal. She thus advocates more in-depth qualitative investigations of immigrant mental health.

Second, diversity of structural intersection is overlooked.[1] In general, sociological studies of mental health are based on the social experiences of the White middle-class. When ethnicity is discussed, it is often Blacks rather than other ethnic groups that provide a reference point for the White population. Experiences of lower-class people are also rarely discussed. In my view, mental health research to some degree is the study of the oppressed, because mental illness is often found in disadvantaged populations, such as women, minorities, the unmarried, the elderly, the uneducated, the unemployed, and the poor (Mirowsky and Ross 1986, Portes and Rumbaut 1996, Vega and Rumbaut 1991). While ethnicity and class, along with gender, are all important structural intersections that produce inequalities, the omission of ethnicity and class in the study of gender and mental health leaves these sources of inequalities and their impact on psychological well-being unexamined.

Feminist Critiques of Mental Health Research

Feminist critiques of mental health research focus mainly on three issues: gender-biased perceptions of researchers and medical professionals; the othering of women; and the neglect of women's subjective experiences.[2]

First, gender stereotypes exist among mental health professionals and researchers. In an early study, Broverman and her associates (1981) point out that mental health professionals convey gender stereotypes in their clinical judgment. These scholars illustrate that in clinicians' views, a "healthy adult" is similar to a "healthy male" and that an "unhealthy adult" is most similar to a "healthy female." In another study, Rosewater (1985) finds that according to the diagnostic criteria in DSM III, women suffering from abuse may be mistakenly labeled as mentally ill.[3] Moreover, because men comprise the majority of mental health professionals and researchers, their measurements create a

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[1] Social inequality is produced not solely by gender or other single systems such as ethnicity or class. Rather, it is formed by an intersection of these structural factors, shaping diverse individual standpoints in society and varied life experiences.

[2] In a society that privileges men, women are often treated as "the other," differentiated from "the norm." "Othering" is therefore used to describe this differentiation by the dominant group.

[3] DSM III, Diagnostic and Statistical Manual of Mental Disorders, third edition, was published in 1980 by the American Psychiatric Association to set forth diagnostic criteria, descriptions, and other information that could facilitate the diagnosis of mental disorders.

greater number of men's perceptions of mental health than of women's. Showalter (1985) also argues that professional conceptions of mental health and insanity are fundamentally gendered. She points out that madness is a female malady, not only because women are statistically more likely to have psychiatric disorders, but also because insanity is an essentially feminine malady. In short, feminist scholars highlight the gender bias of mental health professionals in their labeling of mental disorders (i.e., their tendency to presume that women are emotional, irrational, hysterical, and even "abnormal").

Similar bias can also be found in empirical work. For instance, in a study about women patients who receive psychiatric treatment for neurotic disorders, Miles (1988) argues that women are unable to distinguish their own emotional disturbance from mental illness. In her view, the anxiety and the depression these women report at clinics are not "real" mental illness but problems they can themselves avoid. Miles' statement implicitly suggests women's inability to distinguish their "emotional problems" from "mental illness." This viewpoint devalues women's competence, implying their "irrational" predisposition; it also reinforces the perception that bio-medical knowledge comprises the "orthodox" judgments of mental illness, a perception that overlooks individuals' subjective experiences of distress in social life.

As mentioned earlier, women receive higher rates of psychological treatment than do men (Gove and Tudor 1973). Compared to their male counterparts, women are more likely to report depressive symptoms because of, on the one hand, their lack of confidence and self-coping ability and, on the other, their lower self-esteem (Zukerman 1989). This tendency might lead to the high frequencies with which women seek professional help. Nevertheless, sociologists also find that women suffer more psychological distress than men (Aneshensel 1992, Caldwell, Pearson, and Chin 1987, Dohrenwend and Dohrenwend 1974, Gove 1972, 1987, Gove and Tudor 1973, Mirowsky and Ross 1986). Miles' concluding remarks that women's depressive and anxious "symptoms" need no "real" clinical attention convey a bias in her judging of women's emotional problems. By perceiving women's help-seeking behavior as a "wrong conduct," Miles' statement shows a "blame-the-victim" attitude. This viewpoint not only reinforces gender stereotypes; it also tends to normalize women's psychological

sufferings and leaves the socio-structural roots of their "problems" unexamined. As Miller (1976: 126) notes, "Women are not creating conflict; they are exposing the fact that conflict exists." The social contexts of gendered mental distress therefore should be central to the sociological study of gender and mental health.

Second, women are often treated as the reference group of men in studies of gender and mental health. As Hall (1989) points out, most social psychological studies of mental problems were done about men, and women subjects tend to be regarded as a comparison for them. Under the umbrella of "gender," women are treated as "the other," a reference to the group of men. This tendency is particularly obvious in the study of occupational stress. Whenever women are studied as an independent group, it is often women's family conditions rather than their occupation that are investigated. Women are frequently analyzed in terms of their "place" in society—the family. Furthermore, women's mental health as a subject is mostly subsumed within the general issue of gender differences but is not treated as an independent matter in the literature. The neglect of women per se not only court danger of over-generalizing gender differences in mental health but homogenizes women and ignores their diversities, as well. Women of various ethnicities, classes, sexualities, nationalities, and cultures have different life experiences and perceptions of mental health. They may use different terms to describe their mental problems, adopt different coping strategies in reaction to them, and practice different styles of help-seeking behavior. While studies of gender differences of mental health have recognized that in most cases, women are more vulnerable than men to mental problems, it is necessary to investigate how women from different standpoints differ in their perception and experience of mental health.

Third, women's subjective experiences of mental health are often overlooked. In her book, *Understanding Depression*, Stoppard (2000) points out that the meaning of depression to a large extent depends on the social context in which the term is used and on who uses it. She argues that researchers' notions of depression, based chiefly on positivist perspectives, do not necessarily reflect subjects' depressive experiences. In this regard, Stoppard develops different meanings for terms and thereby distinguishes between depressive disorder (a disorder defined by mental health professionals and

researchers), depressive symptoms (a person's responses on a questionnaire designed by clinical researchers to assess depression), and depressive experiences (people's subjective experiences in everyday life that are self-reported as depression). She criticizes mental health researchers for their tendency to adopt positivist perspectives and measurements and consequently for their neglect of women's experiences as perceived from these women's own standpoint (Stoppard 2000).

5. Filling Gaps: Understanding Socio-Cultural Contexts of Gendered Distress

The sociology of mental health has produced abundant empirical knowledge and discussions concerning gender differences in mental health and their social determinants. As noted above, however, the literature has also left some gaps to be filled. Some of the gaps result from the shortcomings attributable to the major methods that sociologists who are interested in this topic used to adopt (e.g., quantitative methods' deficiency in the discovery of dynamic social contexts that produce distress); other gaps can be overcome by more cautious investigations (e.g., the need to compare groups in different social locations and to emphasize women's subjective experiences). To build a framework that creates an understanding of gendered distress that is superior to the understandings thus far developed, I suggest that we incorporate into our research concepts from the political economy of health and the anthropology of mental health.

Insights from Theoretical Perspectives

The political economy approach to health emphasizes structural factors and power relations that produce inequalities in well-being, two phenomena that have been overlooked in sociological studies of mental health. The anthropology of mental health, or what some anthropologists call "cultural psychiatry," highlights the importance of cultural meanings in the labeling of both mental illness and abnormal behavior.

Political Economy of Health

The political economy approach has been used by many feminists (e.g., Doyal 1979, 1995, Fee 1982, Shiva 1994) in the examination of the interlocking social, political, and economic factors that impair women's health. Drawing on Marxist perspectives, proponents of the political economy approach argue that the social production and distribution of health and illness cannot be separated from larger social, economic, and medical systems. Under the operation of capitalism, not everyone is affected equally by the illness-producing process. For instance, we can find class differences in morbidity and mortality, differential health risks of specific occupations, and unequal health status in developed and under-developed societies. Even medical organizations and practices, whose goal is supposed to be the production of health, often work in the interests of capital (Doyal 1979).

The notion of *power* is central to the political economy approach to health. According to Doyal (1995), the contemporary crisis in medicine is deeply rooted in the nature of capitalism, as both an economic and a social system. As an economic system, medical institutions function according to the logic of capitalism, which benefits the medical profession and industry more than patients. Furthermore, as a social system dominated by men and medical/scientific knowledge, the medical setting is an arena within which power relationships are omnipresent. In other words, economic power dominates the operation of the medical industry, while social and professional power determines the definitions of health and illness that are used in medicine. In a similar vein, in the larger society, various forms of power determine the distribution of resources, a fact that leads to unequal social and health statuses. The political economy of health approach, therefore, aims to investigate the power structure that is shaped by interlocking economic, social, political, and cultural forces.

Feminists who adopt the political economy of health approach emphasize the importance of social contexts and their impact on women's health. For example, Becker and Nachtigall (1992), Fee (1983), Hubbard (1995), and Lowis and McCaffery (2004) all argue that women's health has been over-medicalized, a phenomenon that entraps women's bodies within a male-dominant medical gaze and control. Women's

"problems," especially reproductive-health issues such as pregnancy, childbirth, and menopause, have been medicalized. Women as a group thus tend to be defined by their biological sex and reproductive potential in medicine.

In addition to medical power, how larger structural (political, social, economic, historical, and cultural) factors affect women's health has also been widely discussed in the political economy approach of health. For instance, ecological feminist Shiva (1994) demonstrates how capitalism, imperialism, and colonialism can damage the environment and consequently endanger women's survival and health in the Third World. Thomas (1994) argues that poverty, an indicator of economic inequality, constrains women's life chances and places them at great risk for many stress-related illnesses. She therefore advocates the position that sociologists examine the stratification hierarchies, social relations, and power structure that prevent women and other disadvantaged groups from equal access to health care.

Moreover, Krieger and Fee (1994: 18) maintain that the way gender, as a social reality, intrudes into the body and transforms our biology is usually ignored by sociologists. They illuminate this statement by referring to a widely acknowledged discrepancy: in childhood, boys and girls receive different (gendered) expectations about exercise and, thereby, develop different body builds. The biological category "female," as a result, actually carries and is shaped by cultural norms of gender that are differentially experienced according to ethnicity and social class. Krieger and Fee therefore argue that patterns of health and disease are highly related to how people live in the world, and thus they insist that women's lives and the social contexts (the intersection of gender, social class, and ethnicity) within which women live should be carefully examined (ibid.). In other words, from the perspective of political economy of health, macroeconomic structure, class, ethnicity, and paid and unpaid work are all considered important contextual dimensions that affect women's health and lives (Bartley et al. 1992, Gallin 1989, Graham 1990, Kynaston 1996, Messias et al. 1997).

Cultural Anthropology

Anthropological studies of mental health highlight the importance of cultural values in the construction of mental-illness meanings. As many anthropologists have observed, each society has distinct beliefs about normal and abnormal behavior, and the concepts of emotion, self and body, and general illness differ significantly among different cultures (Fabrega 1990, 1992, Good 1977, Lutz and White 1986, Marsella and White 1982, Kleinman 1988, Marsella et al. 1985). Culture is therefore critical in understanding how mental disorder is perceived, experienced, and expressed in everyday life (Kleinman 1988: 3). In other words, concepts of mental illness are not fixed but specific to a culture at a given time in its history (Foucault 1965).

Adopting this viewpoint, many studies in both anthropology and sociology have discussed how culture in general shapes people's views of mental illness. For instance, Asian views of mental health and illness have been frequently discussed in the literature to demonstrate an "alternative" perspective from the majority U.S. or Wstern culture. Agbayani-Siewert and his colleagues (1999) point out that the notion of collectivism in Asian culture prevents people from seeking professional help for their mental problems, because admission of such illness would make the people who are admitting to the problem "lose face" in front of others. Lin and Cheung (1999) argue that, because Asian traditions view the body and mind as unitary rather than dualistic, people tend to focus more on physical discomfort than on emotional symptoms. Chinese views on the harmony between nature and the universe, as well as on the balance of yin and yang forces in health, also have been discussed in explorations of cultural differences that characterize perceptions of mental illness (Kuo and Kavanagh 1994, Leung 1998). The overrepresentation of somatic complaints and neurasthenia, a phenomenon called somatization of mental distress, has been found in many Asian communities (Gaw 1993, Kawanishi 1992, Kleinman 1988, Kuo and Kavanagh 1994). Undoubtedly, culture plays an important role in the ways mental health and illness are perceived, experienced, and interpreted.

Re-thinking Gender and Mental Health

Both the political economy of health and cultural anthropology bring insights into the study of gender and mental health. First, the political economy approach to health highlights the structural factors that shape social and health (including mental health) disparities. It emphasizes power structure and power relations as constituting the most important factor that causes gender inequality and consequent differences in men's and women's health status. From this viewpoint, power structure and relations are interconnected, as (socio-cultural) structure is itself inequality, produced by power relations and meanwhile shaping power relations.

The political economy of health's emphasis on power structures and power relations corresponds to feminists' concern about women's disadvantaged status in society and academic work. According to Vannoy (2001: 2), "Gender is about the relationship between women and men and that relationship is about power."[4] Therefore, a study of gender and mental health has to examine the power relations between women and men, the socio-cultural structure and contexts within which this inequality is produced, and their consequent effects on individuals' psychological well-being.

Nevertheless, women are not the only "other" that has been excluded from power, and not all women are more powerless or disadvantaged than men. Gender intersects with other aspects of structure, such as ethnicity, class, and sexuality, in the shaping of both social inequality and life experiences. As feminist standpoint theorists (e.g., Harding 1986, Hartsock 1983, Smith 1987) argue, there is no single standpoint that women occupy. Various locations can produce very diverse life experiences, and ethnicity and class are just as significant as gender in shaping these differences (Harding 1986, Hartsock 1983, Smith 1987). For example, non-White men may face worse life chances than White women, and middle-class White women may be more advantaged than both of their lower-class male and female counterparts. Intersectional structural positions

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[4] Although many feminists (such as Vannoy and Doyal) highlight power as an essential element in the production of gender inequality, they do not intend to reduce gender to a "pure" power problem. Rather, they acknowledge that gender is also a cultural pattern from which both women and men suffer because their behavior (including health and mental-health behavior) is greatly shaped by society (Doyal 1995, Krieger and Fee 1996).

shape not only individuals' diverse standpoints in society but also their varied experiences of social life and mental distress.

As I mention above, mental illness is often found in disadvantaged populations, such as women, minorities, the elderly, the uneducated, the unemployed, and the lower-class. This fact suggests that the sociology of mental health is to some extent a study of social inequality and its consequences, of which interlocking structural forces are central. It is therefore important to extend investigation of power structure and relations beyond gender, onto other aspects of diversity, such as ethnicity and class, as well as onto their impact on mental health.
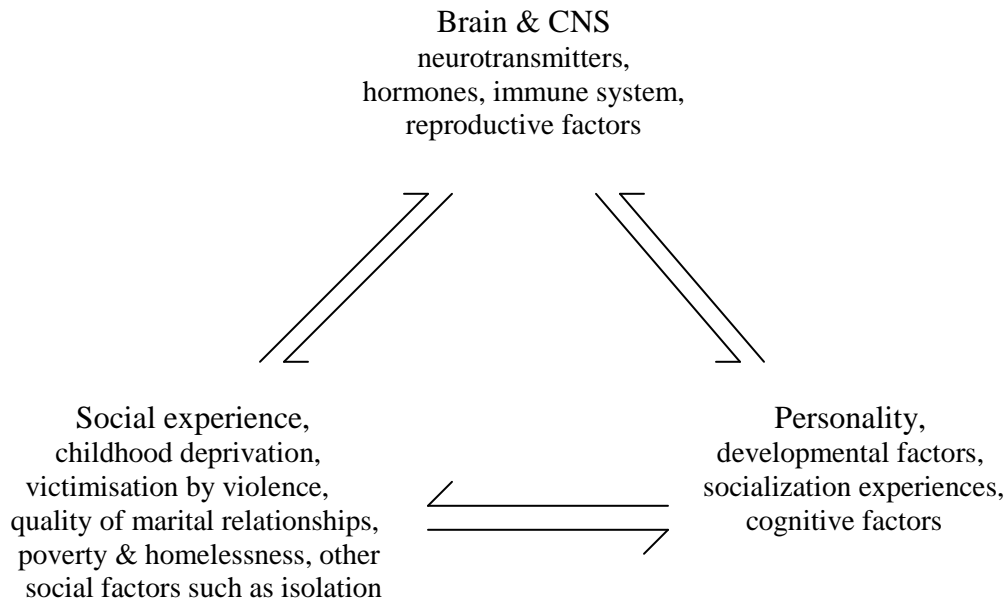
Second, the anthropological perspective on mental illness reminds sociologists about the variations in the meanings attached to psychological problems in different cultural groups, including gender. [5] The concepts and measurements developed in Western societies or primarily applied to the White population may not be appropriate for efforts to interpret the phenomena in non-Western countries or non-White groups. Similarly, as Stoppard (2000) criticizes, men's knowledge of mental health and illness may not reflect how women experience and interpret their distress.

 Some sociologists (e.g., Agbayani-Siewert et al. 1999, Brown et al. 1999, Lefley 1999, Takeuchi, Uebara, and Maramba 1999) have stressed the importance of culture in mental health research. Studies have shown how individuals' social relations and psychological well-being can be affected by specific ethnic cultures, such as the equalitarianism of African American couples (Broman 1991) and the close family ties among Asian American groups (Sue and Morishima 1982, Uba 1994, Wolf 1997), cultures that shape group members' mental health experiences in a way that differs significantly from that of the Euro American population. Moreover, as mentioned earlier, feminist critiques of mental health research have also called for more scholarly attention to women's experience of distress. Regardless of these efforts, cultural dimensions of mental health and illness remain under-examined in the sociology of mental health.

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[5] In studies of cultural psychiatry, anthropologists focus mostly on the cultural meanings of distress in non-White and non-Western communities. Because gender can also be a cultural pattern, it is equally important to examine how women differ from men in their interpretations of, and society's meanings underlining mental distress.

For example, in *Mental Health of Indian Women: A Feminist Agenda*, Davar (1999: 87) examines research on women's mental health and synthesizes a bio-psycho-social model (see Figure 1). Rejecting the reductionism of any single dimension of this model, Davar calls for a sophisticated understanding of women's mental distress that takes into account complex contextual factors, especially psycho-social causes (Ibid.: 74-89).

Figure 1: Bio-psycho-social model for depression (Davar 1999: 87)

Brain & CNS
neurotransmitters,
hormones, immune system,
reproductive factors

Social experience,
childhood deprivation,
victimisation by violence,
quality of marital relationships,
poverty & homelessness, other
social factors such as isolation

Personality,
developmental factors,
socialization experiences,
cognitive factors

In my view, this insightful argument fails to account for an important element—that is, the role that culture plays in the contest of mental distress.[6] According to Chakraborty (1992: 2), "Nothing human can be taken out of culture and studies in isolation." Takeuchi, Uehara, and Maramba (1999: 565) also emphasize that "cultural factors are critical to understand access to mental health services, the proper screening and diagnoses that lead to treatment, and the actual effectiveness of treatment." While the psycho-social dimension of distress has been broadly explored in the sociology of mental health, cultural aspects of this issue are relatively neglected (Agbayani-Siewert et. al. 1999,

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[6] Although Davar (1999) acknowledges the importance of culture in her book (mostly in Chapter Four), she dose not include this dimension in her synthetic model.

Brown et al. 1999, Fabrega 1992, Lefley 1999, Takeuchi, Uehara, and Maramba 1999, Triandis 1993). As Lefley (1999: 584) argues, culture can profoundly affect not only the experience of mental illness and health but its development, as well. Triandis (1993) too insists that psychological well-being is associated with individuals' cultural values and beliefs.

Following these scholars, who acknowledge the importance of culture in mental health studies, I modify Davar's model and create one that is diamond-shaped and includes biomedical, psychological, social, and cultural factors of mental distress (see Figure 2). As illustrated in this figure, biomedical and psychological aspects constitute the individual dimension of mental health, while social (e.g., systems, organizations, systems of stratification, social positions and relations) and cultural (e.g., symbols, meanings, values) factors make up its structural facet. I argue that the lower half of this diamond model, the psycho-social-cultural triangle, ought to be the major focus of mental health research in social science.

Figure2: Diamond-Shaped Model of Mental Health
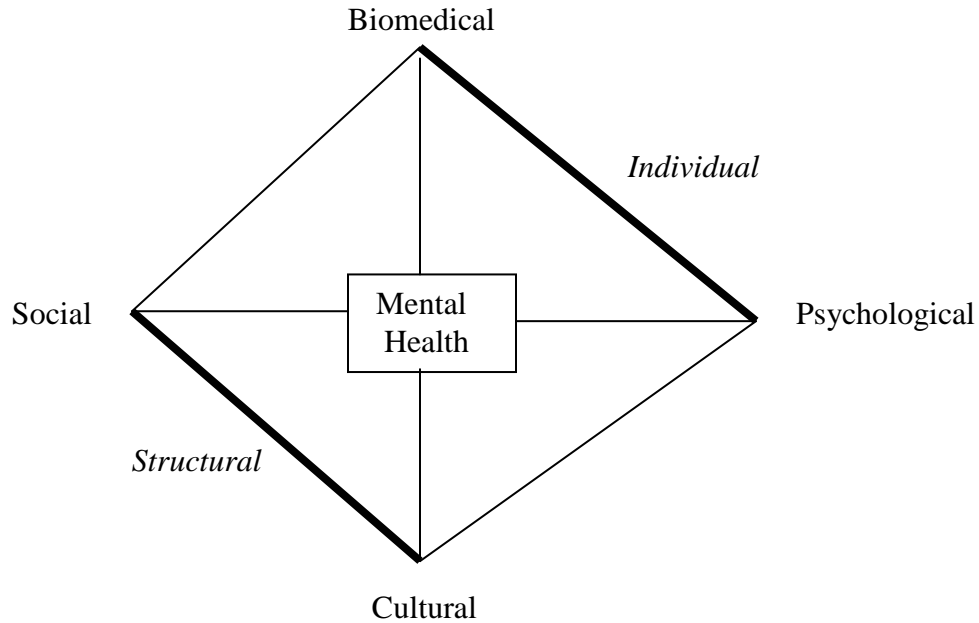
As Gallin (1989) states, an explanatory model of the social impacts on women's health must tie macro and micro phenomena into a dynamic whole that allows for contextual effects and variations. This assertion holds true in the study of gender and mental health, and my diamond-shaped model illustrates an effort to achieve this goal. While both women's and men's subjective discontent to a large extent mirrors certain social inequalities and cultural patterns in a gendered context, it is particularly important to bridge structural factors and individuals' experiences in the examination of gendered mental health issues. By so doing, sociologists are able to fill the gaps in the study of gender and mental health, and thus acquire more comprehensive understanding about the contextual effects and variations of gendered distress.

6. Conclusion: Beyond Gendered Distress

By reviewing the literature on the study of gender and mental health, this article not only synthesizes current knowledge about this subject but also highlights important issues and directions for future research. As demonstrated in this paper, gendered distress and the structural contexts within which it is produced are involved in social and cultural forces that are broader and more complex than a simple gender factor. Structural systems other than gender, such as ethnicity and class, intersect with gender in creating individuals' varied social positions. This intersectional diversity shapes both men's and women's standpoints in society, differences in their social and emotional lives, and variations of the cultural meanings concerning their experience. The interplay of social and cultural contexts and its impact on men's and women's mental health, therefore, should be a central concern in future research so that a more sophisticated understanding of this subject can be arrived at.

Acknowledgements

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Global Policy Outcomes: The Role of NGOs

Abstract

Globalization may be seen to affect international relations in a number of ways. More efficient government and business links can be seen as providing a means to negotiating high levels of political and industrial cooperation, while expanding civil political consciousness may be seen to affect the nature of government approaches toward such cooperation. The paper explores the role played by environmental Non Government Organisations (NGOs) in international policy processes. It is argued that certain such NGOs have had influence over international policy outcomes through a number of their activities, but notably through tapping into, and contributing to, the political demeanor of first world polities. Results of such activities may have mixed costs and benefits for society at large. Despite this, we suggest that NGO forms of politics serve important functions by opening political spaces that may otherwise remain closed, particularly in the environmental arena. Just as many of the negative environmental effects of globalization are common to all humanity, so too are some of the political benefits. We suggest that as a result of this dynamic, NGO forms of politics traverse North/South lines.

Keywords: international environmental policy, civil society, non-government organisations, global commons, interdependence

1. Introduction

One of the great ironies in contemporary politics emerges as a result of the devastating effect that many economic activities in highly industrialised, liberal and democratic states have on the natural environment. It appears that the principles of liberty and democracy as espoused by many modern democratic states create space for economic and political modalities that cause severe damage to the natural environment. There are powerful liberal democracies, on the one hand, which strive for the economic emancipation of their people through tireless development and the accompanying exploitation of natural

resources, including globally shared ones such as the atmosphere and the oceans. On the other hand, there are less powerful states, which are condemned not only to suffer the effects of occasional economic subordination in international trade but also to share certain consequences of environmental degradation, many of which they cannot be held responsible for creating. This modality is a *tragedy of the commons*, where the benefits of environmental exploitation of common resources are not shared while the consequences are (Hardin, 1968, 1243-8). The costs associated with assuring the prosperity of the world's most privileged citizens (in the industrialized world) place many of the rest of the world's less affluent inhabitants in bondage to looming environmental crises.

Despite the recent focus on 'sustainable development', much of the accompanying rhetoric appears to reinforce a notion of environmental goods as deriving their primary value from their instrumental worth to humans. However there are signs that this may be changing – albeit very slowly. The increasing emergence and growing prominence of special groups and individuals appear to be counteracting environmental imprudence through taking advantage of certain principles, such as freedoms of association, speech, and expression, which are upheld in most modern democracies. Employing ideals championed by western liberalism, these groups are making important headway for environmental discourse and action by mobilizing the opinions of the world's publics in favour of nuanced views of the value of nature, including one that sees the natural environment as having implicit value. These international environmental Non Governmental Organizations (NGOs) appear to be turning the tide of environmental degradation that thus far has been fiercely supported by liberal and democratic economic systems.

This article seeks to examine the nature, role, and importance of these international environmental NGOs. We attempt to assess their political influence on the policies of sovereign states and multilateral structures, such as regional and global organizations, through a multidisciplinary research methodology. Theorists such as Stanley Fish have implicitly supported multi disciplinary approaches to research, contesting that the behaviour of individuals and organizations of individuals is dictated to a large degree by their circumstances and experiences within an 'interpretive community'.

This interpretive community is determined by the nature of one's experiences with one's 'significant others' in a society encompassed by a variety of active participants. For example, the interpretive community for states may include influences as considerable as the World Bank, and as apparently negligible as individuals in civil society. The behaviour of states, organizations, and individuals is informed by their experiences within an elaborate interpretive community (Fish, 1989, 4). If the academic endeavour in the social sciences is in some sense to do justice to examinations of the relationships between actors, and the theory that defines those examinations, then this endeavour is an endeavour toward objective truth. Though, without the infinite energy, time and access to information required by the quest for ultimate truth, the academic process must seek credible proximity to truth. At lease in the social sciences, the quest for such proximity to truth is increasingly leading writers to multidisciplinary forms of study. This article seeks to interpret the role played by NGO groups by drawing upon primary and secondary literature from the fields of economics, sociology, political philosophy, law, and political science. Using conceptual analysis to interpret and synthesise this interdisciplinary information, the cognitive outcome for the study is an attempt to outline the role played by specific sociological phenomena within the diverse and complexly interdependent interpretive community that is international relations.

Our argument is four-pronged. First, we show that the pursuit by states of parochial national interests has left a policy vacuum in regard to environmental affairs and action, which has put all of humanity under severe and under-appreciated threat that can only be averted with collective and sustained attention. Also in this part, we examine the constraints facing the international community of states and organizations with regard to meaningful and proactive environmental actions. Second, we identify and explain the reasons for the increasing importance of international environmental groups. In this second part, we suggest that the principles upheld by large modern democracies bring a mélange of environmental costs and benefits to the international arena. Importantly, some such benefits (and costs), which may be relevant also for small and economically disadvantaged states, can be credited to the international activities of environmental NGO groups. Third, we demonstrate that so far the international environmental NGO groups

have served the function not only of environmental watchdogs and conscience, but also as one of the most important sources of challenge and influence over state policies that affect the environment. Finally, we conclude by assessing the future of international environmental groups, recommending that the versatility of these groups will ensure that they have roles to play for international policy processes, even after some of their primary objectives may have been achieved.

2. A Policy Vacuum

During the period between the two world wars, environmental issues were not at the fore of the international agenda. Other than some superfluous attempts by The League of Nations at solving the problem of marine pollution, precious little attention was paid to environmental concerns. After the World War II (1939-1945), environmental issues were still not afforded much notice while other apparently more pressing issues dominated international political agendas. However, this period was important for it saw the establishment of the United Nations in 1945, as well as several important NGOs which would play important roles for environmental action in the future. The year 1965 marked the nascence of an age of environmental awareness. This was characterized by a growing understanding of the seriousness and scale of environmental calamities to come. A perceived need for a coherent response to the problem resulted in at least 47 significant developments in international environmental affairs between 1965 and 2002. One development of particular significance was the tabling of Agenda 21 at the Rio Earth Summit in 1992. This agreement recognized that the environmental problems in one country could have an effect, directly or indirectly, on the inhabitants of the rest of the world (Doyle and Mc Eachern, 2001, 172). Domestic political pressures within the legislature, the government bureaucracy, and the broader political system are immense, and often conflicting (Doyle and Mc Eachern, 2001, 21). A coherent policy approach to environmental issues is therefore difficult for a national government to achieve. Timothy

Doyle and Doug McEachern argue that this political space may be occupied effectively by Non Government Organisations:

> The search for effective and substantial environmental reform has to be pursued in a domain below and beyond the nation-state level. The predominant answer is to value the style of NGO politics that has emerged from this fragmented and diffused political situation (Doyle and Mc Eachern, 2001, 85).

The policy vacuum created by the complicated and sometimes contradictory constraints upon governments is not restricted to the national policy setting but permeates international relations through constraints within each state of the international community. International policy progress may be hampered or enhanced by the international political climate, as determined by the collectivisation of localised political priorities toward a more widely shared and environmentally sensitive global consciousness has yet to take a meaningful place in global policy processes. States, it would appear, have been slow to implement reforms and to embrace new priorities. It seems as if environmental security, though on the agenda, is rather low on the hierarchy of many administrations' political priorities. When economies are sluggish and matters of national security are tainted with incertitude, prioritizing 'green' policies is unlikely to win elections.

Despite our understandings of the long-term consequences of sustained environmentally bombastic behaviour, states, as the supreme law makers, continue to sanction (or turn a blind eye to) unsustainable practices. For example the phenomenon of global warming threatens economies and ways of life all over the world. Perhaps not ironically, the places that are likely to suffer great losses are those that contribute significantly to the atmospheric changes thought to be at the root of the problem. Now densely populated coastal cities not only face the rigours of attempting to keep their economies and societies economically afloat, but also face the looming threat of the rising oceans swallowing their hard won civilisations (Chanton, 2002, 1).

It is surely not the case that states, as the supreme authorities in our lives, and other important organisations will the prevalence of environmental catastrophes. Rather,

these unions are faced by an array of circumstances that constrain their behaviour in such a way as to cause them to commit repeated tragedy of the commons' indiscretions. Environmental crises may seem to emerge as the result of the world's sovereign decision makers simply attempting to perform some of their important functions. Christopher Pierson outlines some of the important functions of states as follows: advancing their economic interests; providing the necessary infrastructures for the sustenance and proliferation their societies; protecting their citizens and borders from possible threats, both internal and external, and projecting a suitable image among other states (Pierson, 1996, 265). Ideologically, many states may support environmental preservation but are unable or unwilling to adhere to their ideological commitments due to any number of practical constraints. Often such states pay lip service to environmental issues, but can be slow to follow up with concrete action. Although the rhetoric may be sincere, budgetary and other factors may hamper the realisation of the promised goals:

> In practice, states have frequently proven unreliable in representing what we might call environmental goods, when faced with short term economic costs such as potential restrictions on industrial activities, or added costs to those activities in order to safeguard the environment (Hurrell and Kingsbury 1992, 111).

Effective leadership, however, should surely not be constrained by the advancement of short-term interests, but also by a wider, longer-term vision. In an international setting, the presence of a need for collective action, and the political will to resolve pending environmental calamities is obvious, particularly in the light of the assertions of agenda 21 of the Rio convention. The political constraints faced by governments makes them unlikely supporters of a globally inclusive environmental effort.

Operating in the public sphere NGO groups have become important political forces, both within and between states. International NGOs are capable of a type of influence that has fewer, or perhaps simply different, limits or constraints compared with those faced by states, where the power to influence the political inclinations of voting publics around the world becomes a power to influence the local policy approaches of not just one, but numerous governments.

3. The Importance of NGOs

Proponents of Game Theory suggest that the activities of states and other international actors are determined by the nature of the structures, which have emerged from proceeding discourses of interaction (Hargreaves and Varoufakis, 1995, 33). Players may choose to co-operate with other players, or not, while the impetus for these interactions is provided by a desire to advance ones interests within a complex interactive discourse. Each interaction plays a role in the evolution of an interpretive community, which in turn, informs the behaviour of each player within their own interpretive communities.

Particularly since the inception of international bodies such as the World Bank, the International Monetary Fund (IMF), the United Nations, and an array of other transnational non-government actors, the understanding of international relations has developed into one which recognizes that there are numerous significant actors, with numerous histories, who interact frequently and at many levels of importance. This interaction can be credited with determining the nature of diplomacy and international relations as we know them. States therefore:

> cannot make decisions without due regard to the concerns and aspirations of a wide array of groups such as industries, commercial companies, political parties, religious organizations, universities, and professional associations and other citizen groups (Uzodike, 2002, 4).

This view of international relations creates space for an analysis of how NGO participation in international affairs might result in policy outcomes, though pinpointing the precise nature of their influence remains challenging given the complexity of relevant policy environs.

Although in this article we argue that NGO groups have influence over national and international policy outcomes, there are theorists who believe the political influence of these groups to be small. Bas Arts and Piet Verschuren have advanced a thesis which offers a technique for assessing the political influence of actors involved in complex

decision making processes. The authors suggest that NGO groups are seldom effective in achieving their goals.

A special method is used to gage the political effectiveness of NGOs in labyrinthine decision-making processes. The technique employs a heuristic formula denoted by the following equation: PI = GA x AS x PR, where PI represents the political influence (effectiveness) of an actor (A), GA denotes the extent to which A has achieved its goals, AS indicates the extent to which the goals achieved by A can actually be attributed to the activities of A, and finally PR signifies the political relevance of the outcome. Each of the variables; Goal Achievement, Ascription and Political Relevance are assigned a 'significance' value between 0 and 3, where 0 = no significance, 1 = some significance, 2 = substantial significance, and 3 = great significance (Arts and Verschuren, 1999, 419). Due to the heuristic nature of the formula, neither goal achievement, ascription, nor political relevance are sufficient conditions for showing political influence, while the product of all three is. Hence, if any (or only) one of these variables is assigned a significance value of 0, then the total political effectiveness of the particular actor is equal to 0. Similarly, if under some as yet unforeseen circumstance it be appropriate to assign any variable or combination of variables a negative value, results of the equation will be grossly skewed.

This being as is may, the formula was applied by the authors to case studies involving NGOs operating in specific issue areas in the period between 1990 and 1995. The findings of the study reported that although NGOs claimed credit for beneficial outcomes in all eight cases, only four cases showed NGOs as having any influence at all, while the other four were exposed as having no influence upon the outcomes of their specific case(s). While Arts and Verschuren contest that NGO influence can be measured in the short run, it may be argued that the heuristic formula used to measure influence discounts NGO effectiveness by neglecting to take into account more qualitative outcomes which may result from NGO activities in the long run. Hence the nature of NGO influence remains curious without an adequate model of how public opinion can affect political processes.

We have identified four of the crucial roles played NGOs in the national and international policy settings. First, NGO groups highlight environmental issues that may otherwise have been sidelined. This role may be denoted by and index for Critical Attention (CA). Second, NGOs provide 'Scientific Evidence' (SE) to provide support for their claims and guidelines for the policy process. Third these groups rally 'Popular Support' (PS) from civil societies, which provides political impetus for formal action. Finally, in some cases, NGOs even play a role as 'Mediators' and 'Arbitrators' (MA) in negotiating new environmental policies within and between governments, commerce and industry.

If we marry the formula offered by Arts and Verschuren to the four roles described above to create a stepping stone toward a different model for assessing the political effectiveness of NGO groups, the results may be slightly different from those offered by the authors. Suppose that PI (political influence) = CA (critical attention) + SE (scientific evidence) + PS (popular support) + MA (mediation and arbitration). Again each variable may be assigned a significance value between 0 and 3, where 0 equals no significance and three equals great significance. However, under these conditions PI becomes the sum, and not the product, of an NGOs effectiveness for each of its important roles in the policy process. This means that an NGO may be credited with due political influence in those cases where the policy process may be slow, or where there may be political constraints upon their ability to rally popular support or mediate and arbitrate deals effectively. The relationship: PI = CA + SE + PS + MA is credible since, given an interdependent view of international relations, the stochastic complexity of pinpointing precise moments, or degrees, of 'goal achievement' or 'ascription' is incalculable given current mathematical tools. Based upon the theoretical implications of this article, our revised formula for assessing NGO effectiveness in complex policy environments assumes a qualitative causal link between NGO activity and the nature of the policy process. Simply aiming to assess the extent to which an NGO performs its important functions provides an indication of the political effectiveness of the particular group with respect to it's process, and ultimately outcome, based goals.

To date NGOs may be credited with a number of important developments, where consistent and timely pressure has caused states and organisations to do things that they otherwise may not have done. Examples of this may be the development, signing and broad based ratification, of the CTBT (Zero Yield Nuclear Test Ban), the International Whaling Commission's (IWC) international moratorium against commercial whaling, as well as several other important developments in the international policy setting. Although there are times when the interests of an environmental NGO may be out-gunned by the power of state interests, at least in the short run. The Kyoto protocol on greenhouse gas emissions is a prime example of this. In this case some states refuse to ratify the protocol because the economic costs may be too great. However, and importantly, this is not to say that the battle has been lost, the process is simply retarded by an array complex political and economic imperatives. At the time when the problem of greenhouse gas emission becomes more urgent, popular pressure may increase, and states are likely to be more inclined to enter into a process toward reform. At this stage NGOs may be able to play their additional roles as brokers of new environmental deals, but for now, at least in the case of the Kyoto treaty, they fulfil a crucial, though perhaps temporary, role as environmental watchdogs.

Ian McLean advances a view of public choice and a market model of political interactions between groups that reveals the origin of the muscle behind civil society groups and individuals. The author shows that as individual preferences are aggregated into social consensus through awareness campaigns and word of mouth, civil society groups are afforded significant power to influence political decisions of their government. This power stems from a market model of government politics which operates through the democratic selection of government officials and political party groups by the citizens of a state (McLean, 1987, 42). The power to influence the hearts and minds of the voting public is, therefore, one which is not to be taken lightly, while the ability to affect social consensus within many states renders these groups powerful players in international relations. And an ability to affect the international relations climate on certain focus issues affords these groups some implicit influence over the activities of smaller states that may be incapable of accommodating sophisticated civil movements of their own.

In a sense NGO groups serve to bring those aspects of the market for political action to national and international policy processes that states may otherwise fail to bring. The invisible hand in some sense ensures that political spaces are identified and occupied by appropriate groups, but only given the advent of groups which may be capable of filling those spaces. Thus, as Louise Amoore and Paul Langley have suggested, the voluntary associations of actors within NGO groups may make a place for not only counter weighting government processes but also for contributing to forms of global governance in certain ways (Amoore and Langley, 2004, 89). The principles espoused by modern liberal democracies, therefore, bring a certain mélange of costs and benefits to the environmental well being of the planet. On one hand these principles may underpin environmentally harmful production patterns, while on the other, the same set of principles provides a forum through which action can be taken to counter such activities. In both instances the effects are global in reach. Just as the costs associated with the production of environmental externalities in the first world are shared, hence becoming *tragedies of the commons*, so to are the benefits associated with first world support for non governmental environmental action shared – thus becoming *felicities of the commons*, or any appropriate variant.

James Connely and Graham Smith suggest that although such extrapolations of the role played by NGO groups in international policy processes may be a useful, there are some environmental groups that would claim not to be seeking to influence public policy at all. Rather some anarchical groups suggest that public policy may be one of the causes of environmental crises. For Connely and Smith important distinctions must be made in terms of who and what different groups represent, and by whom they are recognised as legitimate. The first distinction relates to groups known as 'cause' or 'promotion' groups as opposed to 'interest' or 'sectional' groups. Cause groups represent particular beliefs and principles. Some of the more famous groups that fall into this category are Greenpeace, Friends of the Earth (FoE) and the World Wildlife Fund (WWF). Each represents a particular set of principles as well as certain environmental causes.

Interest groups are somewhat different; for these groups membership is restricted and activities are usually informed by a desire to advance the common interests of the members of the exclusive group. Typically trade union and land owner groups fall into this category. The second important distinction that can be made is one between 'insider' and 'outsider' groups. Insider groups are viewed by large government or commercial agencies, who may from time to time consult a particular group on public or company policy issues, as being legitimate. Outsider groups are not recognised by large agencies as being legitimate and therefore do not have any direct input on public and company policy decisions (Connely and Smith, 1999, 75), although they may have significant indirect influence.

The forms of action employed by both insider and outsider environmental groups are diverse, while the approaches for each group are likely to be constrained by their status as an insider or an outsider group. The various methods include informal contact and influence over politically influential individuals and clusters, formal lobbying, letters and petitions, scientific research and reports, consumer boycotts, court action, demonstrations and marches, media stunts, non-violent civil disobedience and violent direct action. Some of these techniques have in the past proven to be highly effective mechanisms for allowing NGOs to express and realise their political will.

After its nascence in 1971 Greenpeace began its career as an organisation with heroic members who were prepared to challenge previous limits to direct action. Using the media as a vehicle for catalysing public opinion on environmental issues, this organisation has made environmental action a form of heroism in societies across the globe. From its beginnings as a renegade group of activists from the Sierra Club, Greenpeace has accrued such public acclaim that it is now a multi-million-dollar organisation with citizen support across the globe. The public appeal of this organisation is so great that occasionally news agencies have been reluctant to publish stories that might damage its image. And nowadays Greenpeace is so highly regarded that its scientists offer some of the most reliable evidence concerning environmental issues, and are frequently called upon for information intended to inform policy frameworks for particular problems. Although at times their activities have been viewed by states as

being excessive and over subversive, public perceptions remain key to their political effectiveness. In the wake of the bombing of the Greenpeace flagship, the Rainbow Warrior, by the French government in Auckland harbour, and in response to organisations overt opposition to the 1995 French nuclear tests at the Muroroa atoll, many of the world's people were behind Greenpeace.

4. NGOs as Environmental Watchdogs

Activists within mainstream political parties, more formal green political parties, green business and consumer groups, and individuals searching for alternative ways of life in green communes are some of the different components of the environmental movement (Connely and Smith, 1999, 68). Although the desired outcomes for these groups may be diverse and numerous, ultimately sustained change is desired. Attempts to achieve this change may cause NGOs to pursue narrow objectives such as the signing of unilateral agreements, the adoption of multilateral treaties, or even the development of new environmentally protective laws. Problematically though, such agreements and laws seldom address the causes of environmental questions, but rather the effects. Thus a desirable outcome for these groups is one that addresses the attitudes, practices, and circumstances that form the foundation of a particular problem. Indeed it seems probable that environmental action may have either (or both) a direct or an indirect affect on policy outcomes by way of their influence over the consciences of the voting public, while this influence in itself can take different guises (Zeff, 1994, 63). Robert Morris argues in support of this view suggesting, particularly when it comes to economic policy, that public (consumer) pressure is a principal determinant of new policies (Morris and Duffy, 1998, 292). However, such effectiveness is not restricted to economics, but can (and has) affected government decisions on an array of matters including national defence. In 1995 the Greenpeace opposition to the French nuclear tests in Muroroa Atoll was so highly publicised that one commentator said '..as 1996 approaches, it is difficult to tell if the

French government is more unpopular at home or abroad..' (Greenpeace Organization, 1995, 1).

As a result of heightened environmental awareness in the USA: 'Many members of Congress who had never been interested before have begun leaping on the environmental bandwagon with their own pet conservation[al] proposals' (Hurrell and Kingsbury, 1992, 313). The pressure from other international actors, spurred on by NGO activities, may also be seen to have an important effect on the political posture of the ruling party (Busch and Mansfield, 2000, 364). The effectiveness of such groups arises since, despite the enormous and various priorities for states, no government at the head of any democratic state can afford to loose favour with its own constituency. If they do, they should be trumped by more politically correct opposition. Thus, public opinion becomes a catalyst for bridging the political space between a government and a NGO in a sedimentary political evolution.

The influence of these NGOs also has an impact upon the behaviour of other important non-government institutions. The president of the World Bank has credited NGO pressure with 'spurring needed changes in the way that the World Bank does business' (Hurrell and Kingsbury, 1992, 313). Perhaps one of the most significant impacts on the global community by civil society movements has been with regard to whaling. The case of whaling is particularly interesting as, unlike many other ecological issues, the preservation of whale species has little direct impact upon the sustainability of global commerce, nor does the potential eradication of whales impose a direct health risk to the globes population. The anti whaling movement may then be stemming from an appreciation of biodiversity or reverence for life that transcends traditionally more positivist forms of socio-economic consciousness and political imperative.

In 1925 the first large scale whaling factory ship floated onto the worlds oceans - this revolutionized the whaling industry. Whalers typically hunted one population after another, moving from species to species, killing an estimated 1.5 million whales between 1925 and 1975. The decimation of the globe's whale populations caught the attention of NGOs and media organizations around the world. Soon whales became favourite creatures in millions of households, and their hunters' public images were tarnished by

explicit video footage of the bloody slaughter of some of the world's largest and most intelligent mammals. Later, and after repeated requests from the world community, the IWC agreed to a moratorium on commercial whaling which would come into effect in 1986. Despite attempts by the Fisheries Agency of Japan and other whaling bodies to overturn the international moratorium by using political persuasion to 'buy' pro whaling votes from smaller constituencies such as Antigua and Barbuda, Dominica, Guinea, Grenada, St. Vincent and the Grenadines, St. Lucia, St. Kitts and Nevis, Solomon Island, Panama and Morocco, the moratorium remains unbroken. It seems that even in the face of financial reward, smaller states may be reluctant to oppose the momentum of an international policy movement that may be seen to have gained much of its support from evocative broadcasts into the television rooms of first world households. While there are those who argue that due to imperfections in the system of international law the moratorium has never been fully implemented, today whaling is rare by contrast to the period between 1925 and 1975. Of the 43 signatory states to the IWC, Norway continues to conduct commercial whaling, Japan is whaling under the auspices of scientific research, and the USA, Denmark, St. Vincent, and the Grenadines engage only in subsistence whaling by their indigenous peoples (Greenpeace Organisation, 2003, 1).

In Japan, where whale meat has traditionally formed an important part of the local diet, social attitudes toward whale hunting appear to be changing. An independent poll, which questioned 3000 consumers, released in 2002 by the Japanese national newspaper, the Asahi Shimbun, shows Japanese attitudes toward whales to be significantly different than that reflected a Japanese government commissioned poll released two weeks earlier:

> In that poll, the government claimed that 75 percent of the Japanese people favour a return to commercial whaling under controlled conditions. The Asahi Shimbun poll in contrast shows that only 47 percent of the Japanese public agree with whale hunting. This is down by seven percent from Asahi Shimbun's 1993 poll figure showing 53 percent of those polled supporting whale hunting. According to the current poll over one third of the Japanese public opposed whaling (Greenpeace Organisation, 2002, 1).

Another study by Milton Freeman of the Canadian Circumpolar Institute, comprising a questionnaire consisting of 48 questions, was administered to a representative random sample of about 500 adults in Australia, England, Germany, Japan and Norway, with a sample of 1,000 being drawn in the United States. The first question addressed the ethical acceptability of whaling:

> Respondents in Australia, England, Germany and the U.S. held opinions markedly different from those expressed by Japanese and Norwegians when each was questioned about whaling.

> For example, when asked whether they "opposed the hunting of whales under any circumstances" a sizeable majority of respondents in Australia and Germany agreed (by a two to one margin). However, even larger majorities (two and a half to three to one) in Japan and Norway disagreed with the statement that whales should not be hunted under any circumstances. Opposition to whaling under any circumstances was more moderate in the U.S. (a four to three majority opposing whaling) and even more evenly divided in England with 43% opposed to whaling, 37% not opposed, and a further 19% expressing no strong opinion one way or the other.

> In response to the statement that "there is nothing wrong with whaling if it is properly regulated", about two thirds of respondents in Australia and England disagreed, whereas between two-thirds and three-quarters of Japanese and Norwegians respectively agreed that regulated whaling was an acceptable practice. The U.S. position (55% dis-agreeing with the statement) appeared intermediate between these extremes (Freeman, 1994, 2).

A second question addressed perceptions on policy issues to be addressed by a whaling authority:

> The top policy priority identified by respondents in Australia, England, Germany, Norway and the U.S. was that the most humane methods of hunting be utilized and that strict international controls be put into place.

> In Japan respondents placed highest priority on the sustainability of the whale fishery and minimizing wasteful practices.

Respondents in every country indicated high levels of support (80 90%) for the requirement that harvests should be based upon the best scientific advice.

In further questions about broad areas of policy to be followed in future management initiatives, all respondents placed protection of the whales' environment (against pollution or industrial disturbance) as the highest goal. There was also high priority accorded in each country to the importance of managing whales in the context of marine ecosystem considerations (Freeman, 1994, 2).

Such evidence would seem to suggest that public opinion apropos whaling issues is flexible and has indeed been mobilised in many regions. Importantly, NGO groups that engage in such public information activities also have the ability to represent false truths, be it intentionally or not. Alarmingly Freeman's study shows that although many publics are extremely concerned by the well being of whales, many of these people have little idea as to the actual state of whale populations. Another of Freeman's questions asked about the prevalence of certain whale species:

The level of correct answers was very low: less than 1 % of Germans, about 2% of Australian and English respondents and 6% and 8.5% of U.S. and Norwegian respondents respectively knew that sperm whale numbers (far) exceed 1 million. In Germany about half the respondents believed that there are fewer than 10,000 sperm whales.

In Germany and Australia about half the respondents (60% in the U.S.) believe there are less than 10,000 minke whales in the world, and only about 5% thought that the number was greater than 100,000. Respondents in Japan and Norway were three to four times as likely to select a correct answer for minke whale population levels compared to those in Australia, England, Germany, or the U.S. (Freeman, 1994, 4).

The evidence suggests that as technological advances in media and communication networks facilitate globalisation, it becomes possible for the worlds citizens to develop a politically important global consciousness. However, such an evolving political consciousness is subjectified by rhetoric, false information, or the simple manipulation of statistics by the representation of the subjective interests of citizen groups and/or news

agencies. As citizens become more aware of the world beyond their garden fence political spaces are opened and governments need to begin catering for the diversification of their constituency's political interests. In counter point to the Art's and Verschuren's thesis, NGOs seem to be increasingly well placed to take advantage of the liberties upheld in highly developed, and usually environmentally destructive liberal democracies, for their own ideological ends. Though the challenge of achieving multilateral transparency and reliability among NGO and other groupings in the international setting remains to be met, the role of citizen or non-government organisations is to provide some alternative perspective to the political imperatives of governments and other large organisations. This shift represents a movement toward a more comprehensively enlightened, though more complex and potentially more fraught, international political climate.

5. NGOs in the long run

Environmental legislation and the environmental policy process dates back many centuries:

> National legislation to protect the environment and wildlife can be traced back many centuries. In 1900 BC there were forestry las in Babylon, in 1730 BC a law establishing nature reserves in Egypt. International legislation is of more recent origin, but can be traced back as far as 1781 when a convention was concluded between the King of France and the Prince-Bishop of Basel, to protect forests and game birds on their boarders (Cousens, 2002, 1).

Indeed the most effective and substantial environmental reform is likely to come from a realisation within and among governments that environmental issues are national and international security ones. Nevertheless, today the significant policy vacuum regarding these issues has made a place for new non-governmental forms of politics. Environmental NGOs fill this niche out of a perceived need for change, while these groups are faced

with a potential paradox, for, as their effectiveness increases the need for their continued interaction in the political environment may decrease. If states adopt serious and effective policies for the preservation of environmental goods, the need for civil action diminishes. At present environmental NGOs have one place in the cacophony of often conflicting voices heard by states. Serving important functions as both watch-dogs and political consciences, their role is made important by the gravity of the numerous other constraints upon states.

In support of this thinking, Elinor Ostrom suggests that at the heart of most environmental dilemmas is the problem of the 'free rider' (Ostrom, 1990, 2-3). The free rider is the actor who takes advantage of a tragedy of the commons scenario for their own gain. For example in an atmosphere that can only accommodate 20 units of production at equilibrium, each of two factories should only produce 10 units. However if factory owner A produces 11 units, while B continues to produce 10 units, A enjoys the full benefits of the extra unit of production (+1) while she shares the consequences of the extra unit of production with B (-0,5). In this case A is free riding to the detriment of B. Hence it becomes rational for both to free ride at the expense of one another, with the long run result of the atmosphere's ability to absorb more units of pollution collapsing, at a positive cost for the both members of the two factory industry as well as any incidentally affected actors. This free rider effect plays itself out in the real world every day and within numerous industries employing numerous resources. Even in the case of the regulated industry the free rider approach remains a rational means to securing extra units of output and profit. Hence from time to time large and small-scale covert poaching operations are uncovered in national parks and fisheries around the world, as too are industries exposed as polluting where they should not be and/or in volumes prohibited by law.

Although environmental policies for preventing such behaviour are likely to become more numerous as a result of NGO activities, the logic underpinning of the free rider problem is unlikely to vanish. Regulation may improve, yet there will always be a need to regulate the regulators and weed out the free riders who take advantage of a dynamic political system. As too will there exist the need for monitoring, assessing and

redefining policies. Hence the future roles for NGO groups appear to be reinforced by both their ability to adapt to change, and the fundamental logic behind free riding. As political phenomena that have been borne out of need, new spaces created by changing circumstances will certainly be occupied by environmental NGOs which by their very nature full the spaces left by changing political circumstances. In our view then the space occupied by NGOs is unlikely to vanish, but is rather likely to keep evolving as their goal posts move in accordance with the evolution of the policy environment.

6. Conclusion

Although many powerful liberal democracies are shamed for their hegemonic approaches to international political problems, the emancipation of the environment is likely to be significantly bolstered by NGO forms of politics that are expedited by the liberal principles espoused by those states. It is also the very inhabitants of such developed countries that are enabled by technology and a certain level of affluence to participate effectively in NGO styles of politics. In contrast to present modalities, NGO success in the middle term is likely to show that the emancipatory principles of liberalism may be a key to overseeing the well being of the earth's inhabitants.

NGO groups, however, cannot achieve the same levels of success in non-democratic societies as they can in democratic ones because of their heavy reliance upon civil liberties that are generally not supported by such states. While this may limit the scope for influencing the policies in undemocratic societies, democratic societies are prominent enough to provide sufficient scope for NGOs in national and international politics (Raymand, Jancar-Webster and Switky, 2001, 256).

This study draws critical distinctions between short and long run outcomes, recommending that due to the nature of NGO influence in the long run, there exist possibilities for NGOs to significantly change the nature of international relations through affecting implicit changes in the hearts and minds of citizens of more developed democratic states and their elected officials. Hence NGOs are empowered to have

influence beyond their first world support bases and into the borders of an array of states, including less developed, and even undemocratic ones. By opening a space for building bridges between diverse political entities at an international level, these groups create the possibility of a new role for NGOs as facilitators and gatekeepers of a fresh discourse of cooperation. As the role of these groups evolves, this cooperation has the potential to engender not only greater North – North cooperation, but also greater cooperation between North and South, at an array of both formal and informal levels. In an age that will forever be remembered for globalization, new meaning is brought to the concept of civil political organisation as a common property resource.

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Can we understand the role of NGOs in environmental politics without questioning the nature of the changes they propose and the scales they work at?

What role do international environmental NGOs really play? This question has been the subject of many debates over the last ten years. Political scientists, geographers, anthropologists, sociologists, etc. have all brought elements towards a better understanding of the impact of these actors on environmental politics. This is the task that the authors of *Global Policy Outcomes: The Role of NGOs* set themselves.

We can only agree with the arguments presented by Jonathan Stilwell and Nwabufo Okeke Uzodike when they demonstrate, drawing on an ample bibliographical review, that NGOs do influence environmental politics and that there exist, in the long run possibilities for NGOs "*to significantly change the nature of international relations through affecting implicit changes in the hearts and minds of citizens of more developed democratic states and their elected officials*" (this issue). Thus, we can say that through their participation in international events and in the drafting of key documents, as well as through their actions bringing about changes in behaviours, international environmental NGOs have contributed to bringing attention to environmental questions. It is undeniably clear, for example, that they actively participated in the construction – during the 1970s – and to the implementation – in the 1980s – of the notion of sustainable development (Chartier & al. 2005). Since the early 1990s, with the radical change of the international context, NGOs have continued these actions, maintaining environmental question on international political agendas. In this period, the actions of NGOs spread across various political scales, making these actors key players in the renewal of the political. In continuation with the aforementioned authors, and drawing on the ideas developed by Beck (2006a, 2006b), we can say that they could bring about a cosmopolitical renewal of the State. Alliances between NGOs and nation-states would, in effect, enable multilateral,

multiscalar and multimetric territorial politics that are, in Beck's work, identified as more adapted to contemporary globalisation processes. Furthermore, these are essential for the establishment of environmental policies.

Although Stilwell & Okeke Uzodike's paper points in this direction and offers substantial and pertinent arguments to understand the contemporary role of NGOs, I wish to discuss two ways in which the strength of their argument is limited. The first is methodological and concerns the lack of precision with which the term "NGO" is employed and the fact that, in referring to NGOs generically, the scale of their intervention is not taken into consideration. The second, and more fundamental issue, concerns their lack of critical engagement with the kinds of changes that NGOs propose and bring about. In this sense, the authors take for granted that what NGOs propose is, by definition, good, whilst I hope to show that this can and should in turn be opened up to critical analysis.

1. What NGOs are we talking about? Where are we talking from?

The authors address this question, and state that their interest is in international NGOs. They then very appropriately differentiate, along with Connely and Smith (1999), "cause groups" from "interest groups". But this is not sufficient, I would argue. It is widely agreed that the diversity that lies under the term "NGO" is immense (Vakil, 1997; Willet, 2002; Chartier, 2005), thus in speaking of NGOs generically without specifying exactly what it is one is talking about, one runs the risk of drawing over-generalised conclusions on a deeply specific world. However, this is not the main methodological problem. The authors state that they are using a "*multidisciplinary research methodology*", but their conclusions, it can be argued, remain those of political science. I would argue that this is because they have not been able to construct a common language on this profoundly pluridisciplinary object, a common difficulty encountered when working on NGOs. This results essentially from the fact that the question of scale is overlooked. Whether one is interested in definitions or in the roles of these organisations, one always approaches the

question from a particular scale, in accordance with the particular discipline one is working from. For example, research on the non-governmental domain of international projection remained, until the late 1990s, the quasi-exclusive prerogative of jurists and researchers in international relations (Ryfman 2004). Conversely, anthropologists, sociologists and to some extent geographers, observed the action of these organisations at national and local levels (Thomas *et al.* 2001, Fisher 1997). Consequently, the role of these organisations were perceived very differently, as the case of international environmental NGOs illustrates.

2. First act of a transdisciplinary research axis: taking scales and metrics into consideration to reveal the complexity of NGO roles

At the international level, researchers tend to focus more on the influence of NGOs on international and state agencies. The predominant approach generally taken in this literature is closely matched by Stilwell and Okeke Uzodike's. In both cases, NGOs are presented as progressive actors, essential to the advancement of democracy and to the extension of a more liberal mode of thinking. NGOs are in effect perceived as a new technical solution to environmental problems, the State being presented as an inhibitor (Fisher 1997). Others, more critical towards existing environmental politics, nonetheless see them as organisations that are capable of transforming the State and society, in particular thanks to their capacity to produce alternative discourses to those of development or environmental agencies (Le Prestre 2003, Wapner 1996, Princen *et al.* 1994). Conversely, some authors, taking as their starting point a factual analysis of local actions, give a completely different interpretation of the impact of NGOs on environmental policies. This literature presents these very same NGOs as politically non-legitimate and as counter-productive organisations, the most radical analyses going as far as describing them as emissaries of a globalised and ultraliberal form of capitalism (e.g. Hours 1999). Aside from the radically different conceptions of development invoked by these different authors, the reasons that induce such divergence in their interpretations

flow from the spatial bias adopted at the outset. A local Brazilian NGO, such as a grassroots fishermen's association, will not have all that much in common with an international organisation like Greenpeace or Conservation International, it can be argued. The difficulties brought about by the question of scale are even more problematic when the objective is to understand the action of an international NGO working both at the local and the global level. A researcher analysing the role of international organisations such as WWF in international lobbying will probably not come to the same conclusions about this organisation as an anthropologist researching this same organisation in the field, at the local level (Chartier 2003). Some authors have attempted accounts with a multiscale perspective, but their original disciplinary training tends to give rise to the prominence of a particular scale over others in the final analysis. This is the case in the work of Paul Wapner (1996) who came to certain conclusions about the local action of NGOs by analysing their impact at the level of international agencies, without, however, confronting global-level discourse to local practices. This is also the case with the paper presented by Stilwell and Okeke Uzodike. However, and equally problematic, some authors focus only on the disjunctions between discourse and local practices, thus losing sight of the impact NGOs may have at other levels. They can thus ommit an important dimension of the impact NGOs have in putting important environmental questions on the agendas of interantional organisations, as Stilwell and Okeke Uzodike have convincingly demonstrated.

Scale must therefore be taken into consideration, and, where possible, within a diachronic perspective. I argue that scale is an essential element in the understanding of the role of NGOs and in understanding the evolution of their position within civil society. In order to apprehend the role of NGOs in a complete and transveral manner, other important elements such as the mastering of different metrics must also be taken into consideration. Whilst this point will not be developed here, I simply wish to draw attention to the fact that questions of metrics and scale, although a product of my own bias as a geographer, are important if one is to understand the nature of imbrications, the degree of insertions, and thus the political power of NGOs in relation to actors of the

public and mercantile spheres that these civil society actors are typically contrasted to (Chartier 2005).

3. From the diversity of roles to the nature of proposed changes: the example of the Good? The case of Greenpeace's actions for tropical forests.

Reflecting on the role of NGOs surely must include questions about what it is that they are changing, not just how they effect change. Such an approach reveals a wholly different aspect of these organisations, and complexifies the analysis we can make of their impact on environmental policies. Can we accept without question the causes that NGOs champion and the solutions they propose? By so doing, do we not run the risk of taking for granted the notion that they inherently "do good". In order to explore this question further, I propose, in what follows, to outline Greenpeace's involvement in national forest conservation policy.

Greenpeace began its campaign for primary forests, in the early 1990s. This campaign was initially quite anecdotal in relation to the organisation's more typical campaigns (such as anti-nuclear testing, in support of the protection of oceans or against the diffusion of toxic substances). However, the forest campaign quickly became one of Greenpeace's main axes, with a total budget of 4.3 million euros in 2001. The forest campaign was initially directed at primary boreal forests, but it was soon widened to include humid tropical forests, and Amazonia more particularly. Although Greenpeace did and still does conduct some actions of the forest campaign in Africa and Asia, since the 1990s most actions were conducted in Amazonia, and finally, in 1997, an Amazonian office was created, which is administered by the international head-quarters in Amsterdam.

In its strategy for primary forest conservation Greenpeace acts on two fronts. The first is in the context of international gatherings (such as the WTO and the G8) where Greenpeace lobbies for governments to commit financially to primary forest conservation and the blocking of illegal commerce of ancient forest products as well as to commit to

taking up a policy of eco-certification of wood and paper products used in the public sphere. The second front is more visible and consists in providing information in the form of reports and carrying out mediatised local actions. These actions have for aim to raise public awareness so as to influence forest policy decision-makers.

Greenpeace's fields of action are numerous and varied in function of their aims and the public they are directed towards. Rather than speaking too generally, I will expose here, in some detail, one campaign that I find particularly representative of Greenpeace's involvement in Amazonia[1]. This is the campaign for the introduction of the Forest Stewardship Council eco-certification label (hereafter referred to as FSC). Greenpeace has campaigned a great deal to demonstrate that the main threat that Amazonia faces is commercial logging. Three overlapping objectives were identified in the mid-1990s to confront this: fighting industrial logging, particularly illegal logging, the protection of mahogany and the promotion of timber consumption from FSC certified forests only. In order to implement these objectives, Greenpeace set up a coalition with local Brazilian groups and began a campaign against large commercial timber industries. The aim was to combine local actions with massive pressure on Britain where the consumption of mahogany was the highest. This campaign, which rapidly spread to the whole of Europe, had a resounding impact. On the Brazilian side, the government announced a moratorium of two years on the logging of Mahogany and Virola, in 1996. This moratorium was then further extended. In Europe, the campaigns prompted the British government to commit itself in 2000 to using only certified timber in public market contracts, such as public sector building-work. The French government followed the British example two years later. In 2002, after several years of lobbying, mahogany was placed on Annex 2 of the Convention on International Commerce of Wild Fauna and Flora Species Threatened by Extinction.

While it is clear that conservation campaigns such as these affect both national and international political agendas, it can be argued that these campaigns also have an indirect effect on international policy-making. By raising awareness amongst consumers,

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[1] For a more complete analysis of the Amazonian campaign, please refer to Chartier (2005).

organisations such as Greenpeace force large multinationals to change their policies. For example, the group IKEA, international leader furniture shop, committed itself to use only timber from FSC certified sources. Lapeyre, the largest retailer of Brazilian timber in Europe signed, along with the main French DIY stores Castorama and Leroi Merlin, a pledge committing them to using only timber from renewable sources by the year 2005.

These examples illustrate the scope of the success of organisations such as Greenpeace, WWF, or Friends of the Earth in influencing governmental policy and multinational entrepreneurs. Although these are very promising results, it is important to ask how effective these policies are in practice, or in the field, so to speak. I therefore propose to look more closely at the main assumptions on which Greenpeace's campaigns were based in order to think more broadly about the effect of the campaign on forest conservation in Amazonia. Three main assumptions are at the centre of Greenpeace's forest campaign in Amazonia:

1. The idea that commercial logging (in particular by transnational companies) is the first cause of deforestation.

2. The idea that FSC is the only credible eco-certification label, and one that is valid for all forest-types. In their words: "*FSC is the only organisation offering a credible worldwide timber certification scheme for all forest types and plantations.*"

3. Greenpeace claims that if European consumers bought only certified timber, the problem of deforestation in Amazonia would be largely resolved.

What can we say of these statements? The first claim, according to which commercial logging by transnational companies is the first cause of deforestation, is only partially true. It is true that the causes of deforestation in Amazonia have evolved, and that the presence of transnational logging companies is very central to the question of deforestation. However, it is extremely problematic to omit that, three quarters of deforestation recorded in Amazonian countries results from the expansion of land for agriculture and that the majority of the annual production of timber materials goes to the

internal (Brazilian) market (Smouts 2001 : 46). Secondly, Greenpeace's claims concerning the FSC label need to be considered critically. There is a substantial literature concerning the history of this label and debating its validity (e.g. Arnould 1999, Bedif & Boudinot 2001, Karsenty 1997 and Zhouri 2002). Drawing on this literature we can say that, in terms of forest management, the FSCs adopt performance standards that are more concerned with end results than with actual practices. They are at times based on imprecise or very general criteria, which leaves much to the interpretation of the accredited organisation. As a label, FSCs favour large and established landowners over smaller landholders who do not have the resources to fulfil the requirements of the label on their plots. Finally, despite Greenpeace's claims, there are many other viable eco-certification systems (such as the International Organisation for Standardisation). To claim the contrary is not only untrue but more illustrative of a marketing ploy than of a conscientious and rational process aimed at establishing the best possible management of tropical forests. With regard to the final claim, namely that a change in European timber consumption, towards FSC certified timber would largely resolve the problem of deforestation in Amazonia, it is important to note that FSC timber represents only a small part of commercialised tropical timber. Given that only 10% of Brazilian timber goes to export, that tropical timber represents only a fifth of world timber production and that in 2001 90% of FSC certified forests were temperate or boreal, it is quite erroneous to propose FSCs as a miracle solution.

This rapid overview shows that Greenpeace has at times built its claims on questionable propositions and half-truths. This raises the question of the relevance of the propositions that this organisation put forward, particularly if one considers the influence Greenpeace has on international forest policy. So although Greenpeace's actions keep forest conservation on the agendas of governments and policy-makers, the resulting policies are not always optimal. Indeed, and contrary to Greenpeace's claim, the real causes of tropical forest degradation will remain practically unaffected by the gesture of an FSC consumer.

Two further concerns can be raised, which I borrow from Smouts (2001). Firstly, certification of small islands of forest vast expanses of badly managed forest leads to a

fragmentation of regions which is not compatible with the idea of integrated forest planning. Further, the construction of a demand for certified forest products creates an expectation of immediacy which implies simple, rapid and homogenous solutions for forest conservation despite the fact that, as Smouts argues (2001 : 308), there is nothing more removed from the forest than this ethic of urgency. Finally, given Greenpeace's influence, we can ask if this organisation does not at times divert attention from the primordial causes of deforestation by proposing quick-fix solutions. By this I mean that, by adopting somewhat manichaean propositions in order to be persuasive, Greenpeace provokes a contraction of debates regarding the solutions to put in place to resolve the problems of deforestation. I have argued elsewhere that these methods are in part due to the institutional logic of the organisation. Large international NGOs must at times privilege media type-logics in order to ensure the continuity of their existence. This is in part due to the fact that 95% of Greenpeace's budget (which in 2002 stood at 160 million euros) comes from individual donations. Media presence is thus a fundamental prerequisite for the maintenance of the organisation's income. These institutional imperatives come into conflict with the organisation's project and may at times impede the development of sound policies, such as in the case of forest conservation.

I have chosen to outline this particular case as it concerns a similar issue to that presented by Stilwell and Okeke Uzodike. This case study is merely presented as an illustration of the complexities involved in thinking about the role of environmental NGOs. Other works show how, at the local level, some organisations can carry values and ideas of nature that are more or less directly at odds with those of the local populations they seek to work with (Chartier 2005, Kolher 2006). I have argued elsewhere that these organisations can be seen as increasingly engaged in an ecological modernisation of capitalism. In effect, by working with large multinational firms who do not fundamentally change their practices, some NGOs, such as WWF for example, merely "green" their commercial partners. This amounts to accompanying the very system which is at the origin of the environmental problems it seeks to address (Chartier 2006, Aubertin 2005).

4. Questioning the changes proposed by NGOs

To conclude, I do not propose to contradict Stilwell and Okeke Uzodike when they express a degree of hope as to the influence of NGOs on national and international public policy. I do however express reservations concerning the nature of this influence, for this raises many important questions. Do the internal logistics of certain NGOs not interfere with the causes they defend? Can the necessary change in behaviour and practices in matters of environmental concern really be brought about by organisations that merely ecologically modernise capitalism? Do the values they carry and defend have any kind of universality, and if so which? Finally, what kind of natures and what kind of societies are imagined and reproduced by these organisations? The answer to these questions resides, I would argue, in a question of scale, but one that is temporal too. The urgency of environmental questions requires short term solutions and answers. These are thus, for the time-being, perhaps more necessarily inscribed within the process I have called ecological modernisation of capitalism. However, a more enduring response to these pressing environmental problems inexorably will require a revolution in the values and principles that govern this destructive system, one inscribed within a much longer time frame. But whichever the temporal frame one is working with analytically, it has become increasingly clear that we cannot make the economy – neither as researchers or activists – of a deeper reflexion on the relation to science and the values implicitly embedded within NGOs. For this will in turn condition the basis upon which alliances between NGOs and actors of the public or private sphere will be re-established. And clearly such an alliance is indispensable for the cosmopolitical renewal of the State.

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Testing for the occurrence of Shill-bidding (in internet auctions)

Abstract
After the emergence of Internet auction sites, both anecdotal evidence and the conviction of a number of shill-bidders document that the problem of shill-bidding in real-world auctions does exist. This finding is consistent with the economic theory of auctions, because sellers do have a motivation to shill-bid. Shill-bidding is harmful because it redistributes surplus in auctions, worsens the information asymmetry between the seller and the bidders, and raises the possibility of a winner's curse and of ex post inefficiency. This paper reviews four econometric procedures testing for the presence of latent shill-bidding, based on the arrival or return rate of bids, the revenue comparisons, the relation between the minimum bid and the secret reserve, and the behavior of bidders and sellers in relation to events outside of the auction of interest. The paper also discusses competing procedures suggested in the literature that identify 'blatantly irrational' bidding under various behavioral assumptions.

Keywords: shill bidding, auction, eBay, cheating, detection

1. Introduction

After the emergence of Internet auction sites, stories about unfair behavior of auction sellers started circulating. Both anecdotal evidence and the conviction of a number of shill-bidders in recent years document that the problem of shill-bidding in 'real-world' auctions exists (Simpson 2000, Lamy 2006). This finding is consistent with the economic theory, as the sellers do have an incentive to participate in bidding for their own auctioned product – namely, to raise the expected revenue from the auction. While they face the risk of winning their product back, and thus realizing revenue of zero, some of this risk is traded off for the chance to increase the final price paid by the winning bidder.

This paper adds to the recent literature on the characteristics, and principally the bidding strategies in auctions. I study illicit shill-bidding and propose four major distinct approaches to testing for its presence in an auction environment or in a particular auction.

This topic is important for three reasons (besides the fact that shill-bidding is illegal):

i) Shill-bidding is likely to redistribute the winner's surplus in an auction to the seller.

ii) In common value auctions, it accentuates the *winner's curse* that is difficult for bidders to account for. Shill-bidding confuses bidders about the good's true value (for instance, Hlasny 2002).

iii) Shill-bidding introduces the possibility of ex-post inefficiency, specifically, the chance that the seller wins his good back even though another bidder values it more (see Chakraborty & Kosmopoulou 2004, Kauffman & Wood 2003a, 2003b and 2005, Bag et al. 2000, or Wang et al. 2001, for more discussion of the consequences of shill-bidding).

Even though this paper focuses on online auctions, shill-bidding is not limited to the Internet environment. The theory and historical evidence suggest that shill-bidding has existed long before (and likely for as long as auctions have been conducted). However, Internet auctions are especially susceptible to shill-bidding due to the non-transparency of online trading (e.g., ease of hiding relevant private information) and the resulting asymmetry of information between the seller and the bidders (Kauffman & Wood 2003a, 2003b).

In what follows, I describe four major approaches to detecting shill-bidding in auctions. Each of the methods results in a statistical test of the null hypothesis of no shill-bidding. As most econometric tests, these tests rely on a comparison of two states with different *a priori* probabilities of shill-bidding (refer to Sections 8.4 and 8.6), and evaluate the significance of the difference between these states. Unfortunately, the results of the proposed tests are rarely crystal-clear, and are sometimes contingent on a number of behavioral assumptions, a consequence of dealing with human behavior. Many factors

enter into auction participants' actions and the shill-bidder has a natural incentive to conceal his scheme. The results of these tests will usually not pinpoint which action was illicit, but they will tell us what confidence we can place on the absence of shill-bidding at a given auction or auction environment.[1]

I review the theoretical foundations on which these methods are grounded and cite the literature responsible for these methods. Finally, I discuss the validity, robustness and applicability of the proposed tests, and suggest on what scale they are sensible to implement. For each test there is a minimum number of auctions that can be jointly tested for the presence of shill-bidding. The tests may be invalid on individual-auction level, due to high auction-specific variation in parameters and outcomes. The conclusions of these tests include:

i)   Evaluation of particular accusations of shill-bidding.
ii) Determination of the effects of a particular auction policy on the likelihood of shill-bidding.
iii) Estimation of the welfare effects of shill-bidding at an auction environment.
iv) Evaluation of the selection outcome of a particular policy – what audience or type of products an auction site draws due to a particular policy. This evaluation is important for auction sites, because it allows them to target specific agents or types of behavior, by modifying the bidding rules.

The next section summarizes the general setting of auctions I will be considering. Since bidding rules differ across auction environments, the next section will also delineate the main points of their divergence and the implications for shill-bidding and testing for it. The auction rules and their heterogeneity are one of the grounds for testing that I subsequently propose. Obviously, the tests are based on the 'detectable' differences between auctions where shill-bidding occurs, and where it does not. Each method takes advantage of a particular dichotomy between the incentives and strategies of: bidders

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[1] One could use the results of these tests to estimate the mean price inflation due to the higher rate of shill-bidding in one group, or the discouragement of bidders, but this issue is not discussed in this paper.

versus sellers; different types of bidders including shill-bidders; or sellers who shill-bid versus sellers who do not.

The following five sections put forward several criteria that can be used to test for the presence of shill-bidding in auctions, and particularly in online auctions. Each section outlines the auction setting in which the test is valid (and sensible) and discusses how the test can be applied and what conclusions can be drawn from its results.

2. Auction environments

Online auctions differ in many dimensions. Many of the differences influence the bidders' and the sellers' behavior and strategy space in various ways (Wolfstetter 1999). Comparing the agents' behavior across environments can be used to answer interesting economic and sociological questions. In what follows, I use the term 'auction environment' in the general sense. Rather than to specific auction houses, it refers to the set of auction rules (e.g., fees, timing rules, information availability, penalty for the detection of shill-bidding) and conditions (e.g., time of the day and day of the week when an auction ends, duration of an auction, item auctioned off) that make a group of auctions (even at different auction sites) likely to yield similar bidder and seller strategies and outcomes.

One auction-specific difference concerns the character of the auctioned goods and the relationships among values that bidders place on them. As the vast literature in auction theory documents, bidders' strategies differ according to whether their values are interrelated, and what information about the good is revealed to them. Auctions can thus be sorted according to where the auctioned goods can be placed in the spectrum from purely common value- to purely private value- types (Milgrom & Weber 1982). In private-value auctions bidders' signals about their valuation of the auctioned good are independent of each other, and bidders do not need to know the valuation of other bidders. In common-value auctions, however, knowing the signals or bids of other bidders helps each bidder determine the true value of the auctioned good. It is thus desirable for a

bidder to observe the bids of other bidders, and keep secret his own bid, less other bidders would update their own bids upward.

Major dichotomy among auction sites concerns the timing of events: Some auction sites (e.g., eBay) have a fixed time schedule, under which the auction automatically ends when the time runs out. Others (e.g., Yahoo) have a system similar to traditional ascending auctions where bidders always have time to respond to other bidders' bids (Ariely et al. 2001). Once the scheduled time runs out, time is automatically added as long as someone bids. This distinction is important because it affects the amount of information available to all bidders in the face of uncertainty over other bidders' signals, and thus also over other bidders' optimal strategies in extracting surplus from the auction[2]. In the limit, it distinguishes the ascending from the second-price auctions, and consequently influences the optimal behavior of agents (for instance, Wolfstetter 1999). In common-value auctions the additional information changes each bidder's valuation, and thus necessarily their bid. Refer to Bajari & Hortacsu (2001), Roth & Ockenfels (2000, 2002) and Ockenfels & Roth (2001) for the implications of different timing rules.

Other variations in auction rules influence the behavior of auction participants across auction sites. The type of fee schedule, for instance, determines the sellers' cost of setting minimum bids and secret reserve prices, the net revenue from an auction, and thus the incentives to shill-bid. The bidder registration procedures can build obstacles to setting up multiple identities and can indirectly increase the chance of shill-bidder's detection. The availability of tools such as secret reserve prices, minimum bids and buyout options obviously alters bidders' as well as sellers' action-spaces, and may represent substitutes for shill-bidding (refer to Section 6). The ability to select one's nickname and earn a history of positive feedback affects the seller's reputation and penalty from the detection of a deviation. The actual penalty for detected shill-bidding can involve temporary or permanent suspension or even criminal charges. Indeed there are auctions and auction environments where shill-bidding is more plausible than in others. Sections 8.4 through 8.6 describe how individual auctions or auction

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[2] The seller's strategy is also affected, since the expected duration of the auction changes with the timing rule, and so do presumably the willingness of bidders to bid in late stages of an auction, the number of bids, and the consequences of the seller's shill-bidding.

environments could be split according to the risk of the occurrence of shill-bidding based on circumstances of the auctions, the properties of the items auctioned, the auction rules and fees, the observable characteristics of the sellers etc.

3. Data

Before delineating each of the tests of the existence of latent shill-bidding, it is necessary to review the data available in the Internet auctions, because quality of this data is a primary determinant of the feasibility of any tests. All data is available for download from online auction sites, either manually or using a custom-built data collection software, which allows a researcher to automatically collect detailed information about thousands of auctions in a very short time. Such data can include:

i) The number and the identities (or nicknames) of all active bidders and sellers.
ii) The bidding experience and history of all participants (e.g., their feedback), as a snapshot or as changing over time.
iii) The characteristics of the auctioned product (its quality and features, shipping cost, shipping time, as well as the amount of information provided[3]).
iv) The timing and the levels of all placed bids.
v) The existence of minimum bids, secret reserves or buyout options.

Furthermore, for each auction site one can record the bidder registration procedures and requirements (such as presentation of a valid credit card number), auction fee schedule and the evidence of endorsement of a no-shill-bidding policy. (For a discussion of auctioneer's action space, see Chakraborty & Kosmopoulou 2004, or Wang et al. 2001.)

For each auctioned object it is possible to obtain a retail or resale value at other auctions or online outlets. For commercial auction participants it is possible to track

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[3] Items sold 'as is' or with major information concealed receive few bids, suggesting a 'lemons market' or risk aversion among bidders.

down information on their specialization, their past, ongoing and future auctions, and their experience and perceived quality.

In addition, it is possible to follow the exact bidding or selling history for a particular agent for a period of time and even across auctions. Researcher can thus check whether a seller (who has accidentally won his object back due to aggressive shill-bidding) resells the same object repeatedly. Discussion of this option is postponed till Section 8.

One limitation of the Internet data is that it generally does not reveal the number of all potential bidders who self-selected out of bidding. Only those participants who place bids (or visit the webpage with auction details) are recorded. Researcher generally cannot estimate how often (potential) bidders check on the standing of an auction (e.g., the current price or the status of their bid).[4] Even though some pages with descriptions of auctioned goods have counters of hits, these measure the public interest in the particular auction (or eagerness of bidders) very imprecisely. As a result, the number of potential bidders is unknown, which is particularly unfortunate in an environment with endogenous entry (Bajari & Hortacsu 2001).

4. Arrival or return rate of bids

Motives idiosyncratic to a certain group of auction participants provide a good way to test for shill-bidding. While regular bidders try to *win* the auction at the *lowest* possible price, the shill-bidder strives to *lose* the auction at the *highest* price.[5] Clear dichotomy between bidders' and shill-bidders' strategies in the common value auctions (and in certain cases also in private value auctions, as noted in Roth & Ockenfels 2000) is in the timing of the arrival of bids. While bidders want to avoid revealing their *signals* about the true value of the auctioned good to other bidders for the fear of updating opponents' valuations and

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[4] Indeed, bidders using automatic proxy agents (i.e., 'snipping' software) may not visit the webpage even once.

[5] This assumes, of course, that the reached price is above his reservation value. No matter whether the seller or another bidder wins the auction, the seller must pay all fees associated with the final price.

consequently being outbid, the shill-bidder has the opposite objective. As theory and empirical evidence suggest, bidders want to postpone bidding until their opponents are unable to react to their bids (Bajari & Hortacsu 2001, Ockenfels & Roth 2001, Roth & Ockenfels 2000 and 2002). The shill-bidder, on the other hand, wants to bid up the price earlier in the auction, to signal that the good is valuable and to give bidders a chance to outbid him. By bidding frequently and relatively early in the auction, the shill-bidder tries to raise the chance of being outbid and to trigger price wars (see Roth & Ockenfels 2000) and frequent upward revisions of bidders' valuations, in order to raise the final price. This strategy and the responses of other bidders are consistent with full rationality. Under uncertainty, even when participants suspect that there may be a shill-bidder among them, they cannot rule out that the suspicious behavior resulted from a bidder's excitement or a 'trembling hand', rather than from shill-bidding. Their optimal bidding strategy can therefore account for the plausibility of shill-bidding, weighted by the probability (perhaps very small) that what was occurring was indeed shill-bidding.[6] In common-values auctions, the shill-bidder's bid provides information about the seller's signal of the item's true value. In that case other bidders may update their bids even if the presence of shill-bidding is publicly known.

The testable conjecture is then that the arrival of bids has a greater left tail in time in the presence of shill-bidding than in its absence. If we can derive a bid arrival or return function for a set of auctions with given characteristics, testing the significance of a skew is a possibility.[7] Roth & Ockenfels (2000) report that the distribution of bids until the end of an auction follows closely a power law, which can be characterized by a single exponent (provided that we do not restrict the number of bids in an interval of time) estimated by nonlinear least squares or maximum likelihood methods. This exponent can be compared across samples of benchmark and suspected auctions, to determine the statistical significance of their difference, under the null hypothesis of equivalence of the distributions. The Pearson's chi-square or the Kolmogorov-Smirnov test can then

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[6] Hlasny (2002) distinguishes three scenarios – no shill-bidding, secret shill-bidding where bidders do not suspect it, and open shill-bidding where sellers have the right to shill-bid and all bidders are aware of this.

[7] As a simple test, one could compute the proportion of bids occurring within particular time intervals until the end of the auction.

evaluate the fit of the predicted distribution under the benchmark case to the distribution of actual bid arrivals observed in the suspected auctions (Goldstein et al. 2004). An important limitation is, of course, the presence of randomness and of auction-specific shocks that allow the level of skew in different auctions to naturally vary. While this test may perform well in comparisons of (similar[8]) large sets of auctions, where one set differs from another in the *a priori* likelihood of shill-bidding (refer to Sections 8.4 through 8.6), it would not produce good results in evaluations of individual auctions.

Another test based on the timing dichotomy takes advantage of the fact that a shill-bidder strives to leave bidders as much time as possible to respond to his bid, and therefore bids immediately upon being outbid.[9,10] This hypothesis, consistent with the theory, results in a test. The test compares the realized timing of bids in an auction with the hypothesized (random) return rate obtained from observing the timing in a large sample of similar auctions. Significant evidence of the presence of 'pairs' of bids in an auction is an indication of shill-bidding. In addition to the above-mentioned test of the power-law arrival rate of bids, which can effectively test for deviations of the distribution of bids from the benchmark hypothesis, we can use more tailored tests to detect differences in the second through the fourth moments around the estimated bid arrival times.

Depending on the amount of structure we want to impose on the data, we can evaluate the overall distribution of all bids, or we can attempt to specify rules for distinguishing regular bids and the shill bids. In the first case, we note that the presence of shill-bidding is expected to affect the variance and skew in the arrival rate of bids even if the mean arrival rate does not change distinguishably. The chi-square test evaluates whether the variances of the bid arrival rate across two samples differ statistically significantly. We may also attempt to distinguish regular bids from the shill bids, and

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[8] Further in the paper, 'similar' will refer to auctions with similar expected number of bidders, seller's bidding history, expected price, time left on the clock, presence of a secret reserve, or other characteristics that can be controlled for by the econometrician with a large sample.

[9] He trades off the risk of being exposed, due to following this strategy, with the benefit of the additional time that he gives bidders to respond to his bid. As a result, his optimal return rate (or bid-placing rate) is still above the return rate of other bidders.

[10] However, note that the total number of bidders and bids may not be higher than without shill-bidding, as some bidders or bids may be discouraged by the lower expected surplus from winning in the auction.

split the data into clusters. We can do this by inspecting the bidding histories and manually marking the suspected bids (based on their distance from other bids, by the identity of the particular bidder etc.) or by using the statistical agglomerative clustering based on the distance of individual bids (normalized by the mean arrival rate at the times of the bids given by the power law distribution). Upon manual selection of all suspected bids, we compare the mean time lags 1) between these bids and the preceding bids; 2) between these bids and the next bids, and 3) among all other bids. Manual selection is, however, time consuming in a large sample and can be called into question. Letting the bid arrival times self-select into clusters statistically is a more robust method that works particularly well in large samples. The number of clusters of bids (endogenous or econometrician-selected) is generated by joining individual observations (using the Ward's method or the k-means clustering, respectively) to minimize a measure of distance of observations within clusters, and maximize their distance among clusters (Everitt et al. 2001). In distinguishing shill-bids from regular bids, these methods analyze the variance of the arrival times, and essentially test for the existence of a bimodal distribution of the bid arrivals. A high prevalence of pairs of bids in the data, unsupported by the benchmark distribution of the arrivals, indicates that a subset of bids is distributed according to a different underlying principle than the rest of bids.

One remarkable characteristic of these tests is that they do not require that the shill-bidder have a single identity. The timing of events can be measured for individual participants or for all participants jointly. These tests rely solely on economic theory and on the statistical likelihood of the arrival of all bids, and take the shill-bidder's incentive to remain clandestine into account. They allow the identities of all bidders to be absolutely arbitrary. Even if the seller's identity appears among the bidders, these tests do not necessarily report shill-bidding.

Although consistent with the theory, the above two tests are unfortunately also consistent with a 'hot-headed bidder' hypothesis: Some bidders may drive up the price from the start of an auction, because they derive utility from having their names listed as the top bidders, because of irrational fears of being outbid or other demonstrated

misunderstanding of the system, or for another reason (see Wang et al. 2001).[11] Both of the above tests assume this behavior away. More importantly, they also require that there be no unobserved systematic heterogeneity, other than the occurrence of shill-bidding, causing the irregularities in the timing of bids.[12] In comparisons of similar auctions, given that bidders and sellers have identical timing motives across auctions, this assumption is plausible.

5. Revenue comparisons

This perhaps obvious method of testing for the presence of shill-bidding is also based on auction theory. It is easy to prove that if we assume exogenous bidder participation, private value auctions achieve no lower final price with shill-bidding than in the absence thereof (Hlasny 2002).[13] The final price is recorded as revenue regardless of whether a bidder or a shill-bidder wins, and the seller must pay auction fees on this amount. Thus, comparing the final prices at similar auctions can serve as an indicator of shill-bidding. The researcher may deploy ordinary least squares regressions on the set of benchmark auctions to fit final prices using all observable properties of the auctions, and use the estimates to predict the final prices in the suspected auctions. Significant unexplained deviations of positive sign are indications of shill-bidding.

As with the tests of Section 4, this test is more applicable in comparing sets of auctions or auction environments, rather than individual auctions, due to high auction-

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[11] Another story consistent with the above phenomenon is of a bidder who strives to persuade other bidders that shill-bidding *is* occurring in that auction, in order to discourage them from participating. This bidding strategy has, to my knowledge, neither been reported nor analyzed in auction theory, but is not ruled out.

[12] For instance, auctions ending early in the morning are expected to have a greater left tail than auctions ending in the evening, because bidders do not want to wait until the last moment to place their bids.

[13] This claim, in general, is invalid for common value auctions, where factors opposing to the shill-bidder's objective come into play. See Milgrom and Weber (1982). With endogenous bidder participation, the effect of shill-bidding on final price is theoretically inconclusive even in the private value auctions (although empirical evidence suggests a positive relationship). Occurrence of shill-bidding in the early stage of an auction raises current high bid and thus decreases the bidders' expected surplus from winning the auction. Consequently, bidders may switch to bidding in another auction where they expect a higher surplus from winning. The ultimate effect on the final price depends on all distributional and probabilistic assumptions, and is an empirical question.

specific variability (unaccounted for product quality, seller feedback, time of day etc.). Furthermore, just as the tests in the previous section, this test is vulnerable to the 'hot-headed bidder' explanation.

6. Minimum bid – secret reserve relation

Shill-bidding can be interpreted as being equivalent to a secret reserve price under which a seller does not want to sell the good, and which he can update throughout the duration of an auction.[14] I thus use the relationship suggested by Vincent (1995) and tested on the Internet auctions by Bajari & Hortacsu (2001) to test for shill-bidding from an alternative perspective. Vincent shows (and proves for a special case) that there may be strategic reasons for a negative relationship between the level of the minimum bid (i.e., starting price) and the presence of secret reserve price in an auction (the decision to shill-bid). He suggests that when planning to use a secret reserve price, the seller ought to set a lower minimum bid than without a secret reserve, because the lower minimum bid can attract a greater amount of bidding, and the seller is protected from receiving a low final price by his ability purchase his item back. Bajari & Hortacsu (2001) conduct a test of this hypothesis in online auctions and confirm the presence of a negative relationship (although their theoretical analysis suggests that the claim does not hold in general).

The test that I propose therefore compares the minimum bid in an auction (or the average, in an auction environment) where shill-bidding is suspected to that in similar auctions. The conjecture is that sellers who expect to shill-bid set a lower minimum bid than if they do not. If a particular minimum bid (or the average in a group of auctions) is significantly below the norm in similar auctions, it is likely due to the seller's plan to shill-bid. We can explain the level of the minimum bid using ordinary least squares regressions, controlling for all observable properties of the auctions. Statistical difference between the predicted levels and the actually observed levels in the suspected auctions

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[14] In common-value auctions a seller may have a private signal about the product's value to him, but he may use the bidding history to update his belief.

gives us the chance that the minimum bids were established using the same principles as in the benchmark auctions versus using another (shill-bidding) strategy. Although this test assumes great amount of technical astuteness from the seller, empirically sellers seem to possess the fundamental understanding of this property.

The advantage of this test is that it is not vulnerable to the 'hot-headed bidder' story. The level of the minimum bid (and the preset secret reserve, if available at an auction site) results solely from the seller's deliberation, is set once and does not require resetting during the auction, and does not depend on any events between the beginning of the auction until its end. No shock on the bidders' side influences the relation between the level of the minimum bid and the decision to shill-bid. Once the minimum bid is set, it also does not affect the seller's decision whether to shill-bid or the level of his bids.

One problem with this approach is that the optimal tradeoff between the minimum bid and the secret reserve is unclear even to experienced sellers, and depends on the probability distribution of bidders' values. One would expect high variation in minimum bids, both when shill-bidding is used and when it is not.

7. Bidding blatantly irrationally

Kauffman and Wood (2003a and 2003b) suggest a simple and sensible test that is consistent with the economic theory and that is likely to endure even the 'hot-headed bidder' story.[15] They note that some online bidders bid in an auction even though a lower priced identical product is offered at an auction that ends sooner. This behavior is hard to justify even by allusions to the bidders' lack of peripheral vision, given that auctions ending sooner are listed – and highlighted – at the top of the page.

For individual bids, bidders or auctions, we can note whether such 'irrational' bidding has occurred, and we can follow individual bidders and the types of auctions over time to evaluate persistence of this behavior across observations. For a larger group of

[15] A fairly implausible exception would occur if a bidder started bidding on a lower-priced item in an auction ending later than a similar auction, and continued to 'hot-headedly' bid in this auction even when the auction ending sooner had a lower going price.

observations, using an *a priori* conjecture regarding a set of auctions (or bids, or bidders) where shill-bidding is unlikely and another set where it is suspected, we can observe the prevalence of rational and irrational bidding in each group. We can test for the plausibility of such chance occurrence using, for instance, the Fisher's Exact test. Using another set of auctions where we have a prior belief about the volume of shill-bidding, we can evaluate our ability to predict the volume of irrational bidding.

One could of course question whether the particular auctioned goods identified as similar are truly homogeneous and comparable. Secondly, this testing method is vulnerable to the existence of automatic bids placed by proxy agents, because it assumes that all auction participants are aware of all auctions and can change their bidding strategy in real time. Inasmuch as bidders can enter the auction without seeing a listing of similar auctions, or seeing different sets of similar auctions[16], this argument could break down because of its strong reliance on full information. This test attributes any unexplained variability in bids to shill-bidding, rather than, for instance, to physical bidding constraints. Finally, this testing method implicitly assumes shill-bidders to bid irrationally 'blatantly,' and at the same time assumes away irrationality of other bidders.

The final point, that sellers bid conspicuously differently than other bidders, is softened by the fact that shill-bidders always face a trade-off between the risk of being detected and the chance of spurring a price war. Rather than bidding irrationally, they simply optimize in the presence of this trade-off.

8. Additional grounds for tests

There are myriad conjectures how to distinguish between competitive and unfair behavior in (online) auctions. Some are suggested by economic theory, some by anecdotal – and yet unproved – evidence. Many are based on a one-sided argument which may hold in real auctions, but which the theory can turn around to show a different result. Here I list a

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[16] The list of similar items is generated based on the exact phrasing of the search that a bidder performed. If two bidders reach the same auction using different keywords, they likely see different lists of similar auctions.

number of suggestions that are unsupported by theory, depend on particular behavioral assumptions, are data-intensive or depend on information that is unattainable.

8.1 Interest in similar auctions: Shopping around

Kauffman and Wood (2003a and 2003b) suggest evaluating how many auctions bidders who are active in a particular auction bid in during a period of time (even before and after the duration of a particular auction). Their story is that shill-bidders are not interested in purchasing and therefore bid in a single auction, while other bidders may 'bid around.' Particularly if the researcher can follow individual bidders over time, bidders who always bid in a single auction at a time are potentially shill-bidding.

8.2 Interest in similar auctions: After not winning

A similar idea is to look at post-auction behavior of aggressively bidding bidders who eventually lose, to see whether they bid in another auction. Since the competitive explanation for aggressive bidding in an auction is eagerness to buy the product, once bidders lose in an auction, one could expect them to bid in another auction for a similar object. If they do not, one can interpret their one-time aggressive bidding as shill-bidding. Alternative explanations or stories can be that the bidder lost interest, lost nerves or quit bidding because of some constraints (e.g., on time). When the researcher can follow the non-winning bidders over time, seeing them repeatedly (unsuccessfully) bid in only one of all similar auctions (in the same product category around the same time) can imply shill-bidding. In any case, this test focuses only on detection of successful shill-bidders, those who did not accidentally win their items back. Since this is only one of the potential outcomes of shill-bidding, this test cannot test for all occurrences of shill-bidding, and is of limited usefulness.

8.3 Reselling of an accidentally purchased item

Similarly, one could follow the seller (or the winning bidder) in an auction, under the hypothesis that if the shill-bidding seller accidentally wins the item back (himself or using another identity), he will auction it off again shortly. Especially if one believes that

the success of shill-bidding is correlated over time for particular sellers, one can follow sellers over time to find repeated deviations from the honest-seller default hypothesis. The Fisher's Exact test or a similar test of a pair of observed variables tells us the probability that the observed number of deviations in two subsets of auctions arose by chance. However, this test can only detect unsuccessful shill-bidders, those who have accidentally overbid other bidders. This test is thus limited in its usefulness, because even if we detect all shill-bidders who have won their items back, we do not learn how much latent successful shill-bidding activity there occurs. Inasmuch as there are rings of shill-bidders[17], it may also be difficult to follow the destiny of the items purportedly purchased by accident. Also, since commercial sellers may have more than one identical item for sale, it is difficult to ascertain that a particular item is the same as one previously sold.

8.4 Other distinguishing auction characteristics

We may believe that different types of sellers and buyers have different motives for illicit behavior. Businesses selling in online auctions may be more constrained by government, and stakeholder and employee oversight, and may not be able to shill-bid as easily as private citizens. Tax considerations may further reduce commercial sellers' motives for shill-bidding. Seller names may hint on the experience and the specialization of sellers. Low price items may be less worth shill-bidding on, since shill-bidding requires effort and physical presence and carries a risk of defamation and a penalty. Times of bids may tells us the likelihood that a seller, in a particular time zone, is awake or otherwise capable of shill-bidding. While speculative, these tests can supplement the results of other, more robust, tests. Indeed, once shill-bidding is strongly suspected, the researcher should evaluate all of these claims to ensure robustness of his primary test.

8.5 Private-values versus common-values auctions

As was mentioned previously, auctions can be distinguished according to how bidders form their valuation of the auctioned item (for instance Milgrom and Weber 1982). In private value auctions, bidders do not update their value based on the behavior of other

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[17] The media have recently reported collusion among sellers of antiques on eBay.

bidders (Hlasny 2002). They may only update their belief regarding the probability of winning in the auction and the price paid, based on the distribution of others' bids. Shill-bidding can affect bidders' behavior – the likelihood of bidding – only in this way. In common-value auctions, shill-bidding also affects the value that bidders place on the auctioned item, so there is a greater potential gain from shill-bidding. Therefore, comparing auctions with similar products, one labeled as private-values and one as common-values, after controlling for the differences in strategies of honest bidders, is a potential testing approach.

8.6 Bidders' experience

One could also form a hypothesis regarding a normal bidding pattern for an agent with a given bidding experience, bidding for a given type of goods. (As Roth & Ockenfels 2002, and Wang et al. 2000, for example, verify in online auctions, bidders with longer bidding history tend to bid later in an auction.) Then one could test the consistency of an observed bidding pattern with this norm. (See Bapna et al. 2001, Gulati 2001, or Wang et al. 2000, for the discussion of the types of bidders.) The conflict in mind is that while shill-bidders do want to present themselves as experienced bidders, they presumably bid earlier in the auction. More experienced sellers may be more likely to shill-bid, and may also use a more sophisticated strategy to do so. Bidding early in the auction, for instance, is of course inconsistent with our expectation of an experienced bidders' behavior, and is thus grounds for a test.

8.7 Alternative auction ending rules

An interesting question that remains to be rigorously studied is how shill-bidders behave in auctions with flexible ending times, such as at Yahoo (Ariely et al. 2001). While bidders have no incentive to prolong an auction, shill-bidder may want to prolong its duration until the risk of winning the item back surpasses the chance of inviting a bid from another bidder. The statistical test could thus compare the length of auctions, or the number of times that the duration was extended in a group of auctions where shill-bidding is suspected.

These ideas are not stand-alone tests of shill-bidding, but may be used to complement other tests. They are data-intensive or depend on certain speculative beliefs regarding a group of agents. Nevertheless, they may be used to quickly evaluate a particular accusation of shill-bidding in order to warrant or suspend further investigation.

9. Final Remarks

A valid criticism of the methods proposed in Sections 4 – 7 is that they require the existence of clearly distinguishable treatment- and control- groups of auctions. As most econometric tests, they evaluate a particular claim against a benchmark, which in this case refers to auctions where shill-bidding is either known to be absent or is less likely to be a problem. The problem of this definition of a benchmark, and of the use of a particular set of auctions as a benchmark, is that online auction sites are not an environment where one could easily isolate a control group of auctions. To differentiate auctions with respect to their vulnerability to shill-bidding, one must either look for a good criterion that makes shill-bidding less likely in a certain set of auctions compared to another set, or one must run a controlled experiment in which this criterion is unnecessary.

Experiment that is readily in mind has to do with re-auctioning goods that have been auctioned online before. If conditions of the original auction are closely reproduced, and if the bidder pool fails to realize the link between the original and the new auctions, one can use the above tests to evaluate whether shill-bidding could indeed have been present in the original auctions. Unfortunately, the sample size of auctions for such an experiment, particularly those in the control group, would likely be small.

Alternatively, there exist criteria that make a group of auctions more susceptible to shill-bidding than another set. Policy changes provide a good testing ground. When an auction site modifies its bidding rules, researcher can use the above tests to evaluate the effect of the policy change on the occurrence of shill-bidding. The assumption of ceteris paribus is frequently plausible. (If not, the econometrician must control for self selection,

which affects the auction-site-variant expected number of bidders, the types of bidders and of auctioned goods attracted by a site, etc.) Examples of such policy changes from recent history include the introduction of auction fees at Yahoo, the establishment of the credit-card-number requirement for bidder registration at Amazon, and the modification of fees on exercised secret reserves at eBay. As the online auction environment develops, the lack and asymmetry of information disappear, and the opportunities for illicit behavior change for the better. The econometrician has an opportunity to measure the effect of each policy on the latent body of illicit behavior.

To summarize, this paper has offered four major different approaches to testing for the presence of shill-bidding in auctions. Although all of the above methods are consistent with the economic theory of auctions, they are likely used in finite sets of auctions. Due to high amount of randomness in most auction parameters, some tests may turn out to be valid only for larger sets of auctions. Those tests may be used to evaluate the risk of shill-bidding in auction environments or auction houses, rather than in individual auctions. But while some tests may not be helpful at reviewing specific cases of shill-bidding, they may offer great assistance at evaluating auction rules and other conditions intrinsic in an auction environment. Finally, the proposed tests use different properties of the auction markets to detect shill-bidding. As Sections 4 – 7 have mentioned, some of the tests may be vulnerable to a specific phenomenon that other tests are robust to. Since the assumptions on rationality of agents, or the amount of their strategizing, are subject to debate and may indeed vary across agents, it may be necessary to test for various events accompanying or resulting from certain alleged behavior. Having a set of tests that examine observed actions from different angles is of great value when one deals with such opponent as another human mind.

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Towards New Visions of Doctoral Research: Experiences from an Innovative

Research Training Programme

Abstract

Doctoral research in applied disciplines such as management can be examined from a variety of standpoints. This paper looks at doctoral research in the context of restrictive and liberating forces that act on it. The implications of these forces are discussed from the perspectives of the doctoral scholars and designers of doctoral programmes. The usefulness of forming new visions of doctoral research to meet these challenges is examined. It is argued that innovative and flexible designs of research education can aid doctoral scholars in making their work more effective.

Keywords: Doctoral Research, PhD Experience, Graduate Training, Innovative Research

In this paper, I will examine some issues concerning doctoral level research by analysing them in the light of what I call the 'twin challenges' of research. I will elaborate these challenges, by drawing from discussions that were part of an unconventional programme of research training. In doing so, I want to illustrate how appropriately structured programmes can aid doctoral scholars in forming meaningful visions of research.

1. The twin challenges

I would like to view doctoral research as an attempt to respond to two opposing forces that tug at the researcher. The first of these is restrictive and finds much attention in doctoral programmes; the second is liberating and is rarely addressed in doctoral research in fields such as management. These are:

1. Ensuring that what one is doing is indeed research (and good research at that)
2. Ensuring that one can exercise adequate choice in research (or that one is not overly restricted by the first consideration)

Outcomes of research are easily understood as liberating (at least in the sense that knowledge liberates us from a state of ignorance). However, in this paper, I hope to illustrate that when both the above challenges are met effectively, the very process of research becomes truly liberating for the researcher.

2. The Research training programme

I had the opportunity to examine these two challenges, situating myself in an innovative programme of research education. This consisted of a yearlong series of Research Training Seminars (RTS) at a post-graduate institute of management in India. These seminars were led by individuals with varied backgrounds and levels of experience in research. There were presentations of doctoral work as well as sharing of research insights by seasoned doctoral advisers and research-oriented professionals. According to the coordinator of the programme, a prominent objective of this was supporting high-quality research conversations.

> The basic principle was to create a suitable environment for what may be called *border-crossing interactions* among research students and more experienced researchers, pursuing different forms of inquiry in their respective fields. This has paid off handsomely, in terms of the rich conversations we have had, significant learning acquired, and the network of research-inclined persons, which has grown around this activity. (Dash, 2005, 3)

Though the discussions covered a wide range of topics, disciplines and research methods, some central themes persistently recurred. These provided inputs to the following

analysis. In this paper, references to discussions in these seminars are indicated in parentheses within the text and the referred seminars are listed in the appendix.

3. The first challenge

The first challenge is to demarcate research from other research-like activities so that the doctoral scholar can be sure that his/her activities meet the criteria for being research. But what exactly are the criteria for some activity to be considered research? This has been a central question that many thinkers have tried to address. Various criteria have been identified to demarcate science from non-science. For example, some scholars point out that objectivity is the foremost hallmark of science.

> In what way, then, can science be demarcated from other knowledge producing systems, such as religion, fashion or tradition? The difference is that science *explicitly* promotes the objective criteria. … The objective criteria have been built into the scientific method. They have become part of knowledge itself, rather than an outside force to which knowledge is subjected. (Heylighen, 1997, section 6)

However, 'objectivity' could be interpreted varyingly and finding a universally acceptable definition is a challenging proposition, especially in the case of social sciences. For example, according to Russell Ackoff, objectivity should be the result of free interaction among many 'subjectivities'.

> Objectivity is not the absence of value judgments in purposeful behaviour. It is the social product of an open interaction of a wide variety of subjective value judgments. *Objectivity is the systemic property of science taken as a whole not a property of individual researchers or research*. It is obtained only when all possible values have been taken into account; hence, like certainty, it is an ideal that science can continually approach but never attain. That which is true works, and it works whatever the values of those who put it to work. It is *value-full*, not value free. (Ackoff, 1979, 103)

Karl R. Popper's oft-cited criterion of falsifiability could be a useful way to demarcate research from non-research. Following this, doctoral scholars learn to put forth the results of their studies with much tentativeness, asserting with Popper that 'all theories are hypotheses; all may be overthrown' (Popper, 1972, 29). This is not easy. 'Popper's criterion ignores the remarkable tenacity of scientific theories. Scientitists have thick skin. They do not abandon a theory merely because facts contradict it', says Lakatos (1973, para. 14) The enthusiasm and passion for one's work do not always make it easy for researchers to specify conditions under which they would give up their theories. Jeffrey Pfeffer, an organizational theorist who propounded the 'resource dependence theory' observes:

> ...the philosophy of science not withstanding, theories are quite capable of surviving disconfirming evidence. Behavioural decision theory and numerous empirical tests have shown that many of the most fundamental axioms of choice and decision that underlie economics are demonstrably false. (eg. Bazerman, forthcoming), but economics is scarcely withering away. Nor are the specific portions of economic theory predicted on assumptions that have been shown to be false necessarily less believed or used. A similar situation is true in finance, where assumptions of capital market efficiency and the instantaneous diffusion of relevant information, so that a security's market price presumably incorporates all relevant information available at the time, have withstood numerous empirical and theoretical attacks. To take a case closer to organization studies, the reliance on belief in the efficacy of extrinsic incentives and monetary rewards persists not only in the lay community but in the scholarly literature as well. (Pfeffer, 2005, 453-454)

This explains why doctoral scholars constantly engage with their work even after the completion of the programme. Most often, doctoral research acts as the foundation for one's future academic and professional work. Thus it might help doctoral scholars to extend their horizons beyond mere 'hypothesis-testing' in their research. The requirements of a doctoral programme could probably be satisfied at this level. However,

subsequent anomalies offer the researcher with opportunities to improve the theory (Carlile and Christensen, 2005). In this sense, research is ever an 'unfinished story' (RTS 2.1). This sense of incompleteness is also evident in seasoned researchers such as Victor Vroom who put forth 'expectancy theory' in management.

> Theories seldom meet the test of time. At best, they are reasonably consistent with the existing body of evidence but invite and guide the collection of additional evidence necessary to refute or extend them. Expectancy theory was a useful first approximation to our effort to understand and explain behaviour in and around the workplace. But, there is much more to be done. (Vroom, 2005, 255)

Imre Lakatos (1973) recognizes this long-term perspective of research as he proposes that research programmes, rather than individual hypotheses qualify as the descriptive units of scientific progress. According to him, scientific progress happens not as a result of Kuhnian revolutions or Popperian falsifications, but as a result of the slow process of progress or degeneration of scientific programmes. Progressive programmes are able to predict unexpected novel facts where as degenerative programmes tend to be explanatory in nature and try to accommodate new facts in their theoretical frameworks. Doctoral scholars become parts of research programmes by virtue of the choices they make in the epistemological, methodological, and disciplinary realms. It is important that this allegiance is the result of deliberate reflection and choice. Karl E. Weick who advanced the idea of 'sense making' in organizational theory draws our attention to the advantage of viewing research as a joint effort of a community of researchers who work towards advancing research programs.

> … no one theorist can have it all, "all" being an explanation that is general, accurate and simple….what is impossible for one theorist is often possible for a collection of theorists. A set of people, each with a different pattern of tradeoffs can spread the weaknesses among them and collectively triangulate a set of ideas that survives as a robust, general, simple accurate account. (Weick, 2005, 399)

Anne S. Huff who has made substantial contributions to the area of 'managerial and organizational cognition' points out that theory building can also be dynamic and unpredictable. She sees only the possibility of 'islands of coherence' rather than grand research programmes.

> Theorizing that can quickly change focus and direction also fits a contemporary world that most perceive as requiring rapid change. More specifically, the innate capacity for shifting focus and changing direction is an important reason why we can only experience "islands of coherence" in strategic practice as well as strategic theory. (Huff, 2005, 346)

Scholars such as Feyerabend (1974) have resisted attempts to lay down specific rules for the scientific method. They assert that discussions on demarcation are futile and that it is impossible to differentiate research from what is not. Is this helpful? We have umpteen examples of researchers in the past, in fields such as alchemy, astrology, and quack medicine, who have not subjected their work to the appropriate demarcation criteria. How do we ensure that we are not 'fooling ourselves' (Dye, 2000), as they seem to have done?

Some scholars prefer to talk of degrees of 'researchlikeness' of an activity rather than attempting to differentiate research and non-research.

> The difference between scientific and other knowledge is not an absolute one, between objective and subjective, or between justified and unjustified, but one of degree, between the products of a systematic process of improvement, and those of a slow, haphazard process of trial-and-error, where neither trial nor error are consciously controlled. (Heylighen, 1997, section 6)

This notion might help us to differentiate between good and bad research. Inductive logicians' theory of probabilism enables us to talk in terms if a continuous scale from poor theories with low probability to good theories with high probabilities. (Lakatos, 1973) Different disciplines have evolved different scales to assess the 'researchlikeness' of an activity. Since doctoral studies are most often designed within the confines of disciplinary or methodological borders, it is likely that the traditions of a doctoral

scholar's discipline would determine how this issue is addressed (RTS 2.5, 2.6). Research in professional, interdisciplinary fields can pose new challenges for the researcher. Fields such as management can be viewed as a creative forum that brings about productive engagement among various disciplines (RTS 2.9), and in such domains, the features of 'researchlikeness' are not easily defined in a universally acceptable manner. Armand Hatchuel observes:

> Management sciences are among the youngest of all human sciences. They still suffer from being *bogged down* in recurrent controversies on the effectiveness and meaning of management techniques or their borrowings from a number of other sciences. Too often, they are perceived as a 'crossroads' of other more fundamental disciplines. The management sciences are thus condemned to find a better definition of the true nature of their object and scientific identity. (Hatchuel, 2001, S34)

Under such conditions, meeting the first challenge effectively calls for innovative approaches through explorations of alternative images of research.

4. The second challenge

It is important that the conditions for 'researchlikeness' should not lead to severely restrictive situations for the researcher. Freedom is as important in research as it is in other fields of human action. The observations of Mokyr (2004) in this connection are interesting.

> It is frequently maintained, society needs a certain degree of individual freedom to achieve technological progress. Historically, this is less obvious than it might sound. Technological progress occurred in many places that do not seem free, at least by our standards. What may be more important than "freedom" is a certain tolerance for rebels and deviants, who are dissatisfied with current states of knowledge and think they can do better. It bears keeping in mind that most of such rebels never discover or invent anything

useful and become little more than a nuisance to others. It is a small proportion of them who become the Galileos, Lavoisiers, and Faradays. But *ex ante* it is impossible to know who among them will make important discoveries, so the unavoidable price society pays for technological progress is to put up with troublemakers and crackpots. (p. 11)

History suggests that, in some earlier periods this realization did not exist in some societies, leading to social sanction and punishments for 'troublemakers' such as Galileo. But according to Donald W. Braben (2004), even today, the tolerance for dissent is increasingly being threatened as the result of a system that utilizes consensus (as in the case of peer-review) for funding and recognition. He argues that such democracy is not a good device for science.

Until recently, there was just enough slack in the system to allow such pioneers to flourish. That is exactly how it should be. Nowadays, the bureaucrats have closed these loopholes on the spurious grounds of efficiency, and pioneering projects will probably be set aside as risk too far, especially when funds are short. (p. 11)

Emphasis on the freedom of the researcher calls for a certain level of tolerance for experimentation and even playful exploration in research. This would enable them to experience the joy of discovery and to face those inevitable uncertainties in the process of research effectively. Henry Mintzberg advises doctoral scholars to start with an interesting question and be open to the human elements of imagination, insight and discovery in research. He points out the unpredictability of such an effort albeit in a slightly lighter vein.

I get a kick out of the fact that many of my doctoral students defend their thesis proposals well into their empirical work. After all, how can they know what they will do until they do it? I'm waiting for someone to defend the proposal in the morning and the dissertation in the afternoon. (Mintzberg, 2005, 368)

Writing from Australia, Rolene Lamm (2004) observes how rigid views of doctoral work are giving way to more tolerant, flexible images of research.

> The classic structure of the thesis has given way to theory emerging from data, as well as countless structural possibilities. The elimination of hypothesis generating certainty, defined structure and pattern, and the loss of objectivity fundamental to the traditional dissertation, has left the student and supervisor with greater freedom of choice, and more open boundaries. (Lamm, 2004, 11)

Such optimism is not easily visible in countries such as India (where this author is located). Doctoral scholars in management in India are familiar with an image of research that proceeds predictably in linear, prescribed steps (e.g., Presentation of doctoral work at RTS 2.20). Efforts at research training often promote images of research that drive scholars to inappropriate attempts at quantification to obtain 'hard data'. This leads many scholars to reduce their work to a skilful application of set statistical techniques. This tendency to 'put the cart before the horse' has been deplored by many analysts.

> Reading a typical scholarly management journal today can be depressing – because the vast majority of published papers devote few of their column inches to categorization. When the existence of different categories is noted, often they are handled with dummy variables or by omitting the outliers – as if maximizing R^2, rather than getting the categories clearly characterized is the hallmark of a good theory. (Carlile and Christensen, 2005 p. 8)

On similar lines, Victor Vroom points out rampant attempts at theory testing using inappropriate measures.

> While I am proud of any positive impact that expectancy theory might have had, I would make changes if I were to revise to today. First and foremost, I would certainly eliminate the mathematization and formalization of the theory. I was probably unduly influenced by the mathematical zeitgeist at Penn at the time. Unfortunately, I believe that my

mathematical formulation contributed to many ill-advised attempts to test the theory using measures lacking the ratio/scale properties necessary. Eliminating the formalization might have helped to convey my belief that the theory should be used for its heuristic value in providing a language for formulating questions about the role of beliefs and motives in work and performance. (Vroom, 2005, 254)

Many doctoral dissertations in India can safely be described as a report of similar half hearted attempts at theory testing. The National Institute of Educational Planning and Administration's (2001) report on the state of doctoral programmes in Indian universities has highlighted a scenario that is much in need of improvement. More than ever before, those armed with good quality undergraduate degrees (e.g., from the now well known 'Indian Institutes of Technology') are looking elsewhere for graduate education and research opportunities.

Following the example of some countries in the west with a more conducive research climate, standardization in doctoral training practices is often recommended as a solution to such gloomy state of affairs. In this connection, calls for generic transferable skills training, such as the one by Economic and Social Research Council (ESRC) of UK, are often highlighted (RTS 2.19).

Whatever career paths research students may follow; there are clear advantages to students if they have acquired general research skills and transferable employment-related skills. Broadly-based training should enable students to think through how they can use their existing knowledge and skills in different contexts and apply them to a variety of problems; and, progressively, to identify their own needs for training. Outlets should provide training, which integrates these aspects coherently through, for example, specific coursework, supplementary provision such as seminars, and continuous and effective supervision of the student's research and writing. (Economic and Social Research Council, 2005, section: D1-2)

The importance of skills training in doctoral programmes is widely accepted. However, authors such as Collinson and Hockey (1997 cited in Newburry, 1999) advocate a more

flexible approach to skills training. They draw our attention to the prevailing 'pro research training climate' as a result of the efforts by ESRC and others, and observe that the emphasis on generic skills has led to a rigid model of coursework in the first year of many doctoral programmes. Considering the heterogeneity of students' backgrounds, and the diversity of motivations for doctoral study, they argue that the call to impart generic, transferable skills at the doctoral level is debatable. According to them, skill building could be viewed as a much more accommodating exercise. The focus needs to be on individualized and flexible components, rather than a pre-set training agenda. Following this perspective, research could be compared to a physical exercise programme, in the sense that, the pursuit of any form of exercise increases the general ability of the person to engage in other types of physical activities as well (RTS 2.1). Collinson and Hockey (1997, 377 as cited in Newburry, 1999, 2) recommend the '…develop[ment] of training programmes which have a high degree of flexibility and are thus able to meet the requirements of different groups of students. Research training, as a learning process, needs to be linked directly to the needs of these groups'.

To meet these demands, both doctoral scholars and designers of doctoral programmes need to be open to alternative modes of research.

5. Towards new visions of doctoral research

Researchers who are able to respond effectively to the twin challenges exercise their power to make choices that are crucial. They are aware that they work within 'the boundaries of science [that] are ambiguous, flexible, historically changing, contextually variable, internally inconsistent and sometimes disputed' (Gieryn, 1983, 792). Through reflexive exercise of choices, they are able to define their work within the ramparts of science, and yet, retain the freedom they desire in carrying it out.

They are conscious that such flexibility and ambiguity can be true of disciplinary boundaries too. In professional fields such as management, they embrace the

interdisciplinary/transdisciplinary nature of their work with enthusiasm. This however is not always easy in typical academic settings. Des Gasper observes:

Universities are indeed cradles of disciplinarity, given their roles as machinery for validating suitability for entry to professional paths and in the socialization of the next generation of academic teachers; and the incentive structures for academics to play safe after and even during their PhD studies and publish prolifically by doing detail work (Earl, 1983). By basing the structures for research on the structure for training, most universities constrain that research. (Gasper, 2002, 9)

Many scholars, most notably Michael Gibbons (e.g. Gibbons et al, 1994) have argued that a new mode of doing research is emerging and that a resultant reorganization of the scientific enterprise is under way especially in industrialized nations. They point to the change to a transdisciplinary, relevancy oriented mode of research (Mode 2) than one that is driven by the logic of academic science (Mode 1). Bruun et al. (2005) argue that there are tradeoffs in adopting either Mode1 or Mode2. They further note that some of the observable tensions in academia are the result of the transition from a predominantly Mode1 forms of research to the Mode2 environment. In India-- which is rapidly industrializing and is at the forefront of recent advances in information technology-- the tremors of such transitions are increasingly being felt. Research training in such scenarios should be sturdy enough to meet these challenges.

Successful departments strike an appropriate balance between explicit and tacit knowledge, the former being mediated in courses and seminars, and the latter in different kinds of practice (the use of an instrument, interviewing people, constructing a questionnaire and so on). In cases of transition from Mode 1 to Mode 2, departments need to re-evaluate that balance, thus increasing the role of tacit knowledge. … Only a more practice-orientated research education can give students experience in integrating knowledge and communicating to different audiences, whilst providing leadership, and opportunities for taking both personal initiative and shouldering responsibility. A common way that we have found to do this is to decrease the amount of obligatory

lectures and increase the share of team efforts, projects, interactive seminars, collaboration with external actors and other similar ways of learning. This transition is problematic from the Mode 1 perspective, because it seems to reduce departmental control over what students actually learn. (Bruun et. al., 2005, 57)

As in other professional fields, much management research is driven by practical problems from the field and researchers are familiar with the idea of a 'client'. Hatchuel (2001) exhorts us to go beyond the normal understanding of these client-oriented partnerships. He says: '…the cooperation with companies should not be perceived as a useful consequence of research but as a prerequisite for the production of actionable knowledge' (p. S39). He sees 'the necessity of a set of principles and rules (a collective chart?) for the design of research-oriented partnerships' (p. S34), and presents such cooperation as one of the 'pillars of new management research'.

Transferability of results has always been upheld as one of science's characteristic features. However, what these models of research propose is the idea of a particular 'pre-specified public' Dash (2002), rather than the unseen, general public. Universal transferability is still an enigma in many applied fields such as management and this is an attempt to propose a viable alternative. Involving the users and giving them voice within the process of research is increasingly being seen as a key element of many images of research. Werner Ulrich points out how such an image is especially applicable in certain domains.

Typical examples are research efforts in the domain of therapy (e.g., psychiatry), social intervention (e.g., care for the elderly or fighting poverty), and organizational design (e.g., management consultancy). 'Patients', 'clients' and 'decision-makers' increasingly claim a voice in the making of the observations of concern to them; they do not want 'diagnoses', 'help' or 'solutions' to be simply imposed upon them without their views being considered. (Ulrich, 2000, 19)

Gerard De Zeeuw's (2001) proposition of a 'third phase science' is based on similar concerns. It calls for lending legitimacy to all stakeholders within research. This stands in contrast to first and second order science where primacy is given to authorities or experts.

> In 'third phase' science the observer must be fully 'attached' as an actor. He or she has to contribute actively: by stimulating observations X, and making sure that the observations lead to objects that help to construct high quality observations. The observer can be seen as a participant, therefore, with the special task of introducing new forms of transfer—while participants become observers with similar tasks. In this way new activities (innovations) can be developed and tested. (De Zeeuw, 2001, 21)

Universities in many countries have responded to the demands for alternative modes of doctoral research by promoting professional doctorates. These typically follow a Mode 2, transdisciplinary approach. The debates concerning the effectiveness of these programmes however, have not reached countries such as India where such initiatives are almost non-existent. Institutions typically shy away from experimentation associated with the design of innovative doctoral programmes. In such environments it is not easy for researchers to break new ground and choose a mode of research that works best for them.

Choosing 'what works for the researcher' might sound heretical to those who view research as a 'detached' activity. They do not view researchers as central entities in their studies. However, there have been difficulties with this perspective. For example, many scholars point out that total detachment is probably impossible. (The difficulty to obtain observations independent of the observing process has been formulated as a 'problem' in the physical sciences long ago.) Most often, at each step of the process of research, researchers' personalities, past experiences and not rarely, biases influence the way they carry out their studies (RTS 2.19). Some research traditions recognize this, and researchers acknowledge how they themselves are important elements of their research. More recently, management researchers have also begun to articulate this (e.g., Johnson and Duberly, 2003; Harley, Hardy and Alvesson, 2004).

Karl Weick adds a note of caution for organizational theorists and puts forth an argument for 'disciplined reflexivity'.

> While it is hard to fault a plea for deeper awareness, it is easy to fault the consequences that can follow if people are unable or unwilling to bound or voluntarily terminate their reflecting. Those darker consequences include things like narcissism, self-indulgence, an inability to stop the regress of doubting the doubting and the doubts (Gergen, 1991: 134-135), an inability to act because self-consciousness is paralyzing, and heightened concern about making mistakes (Schaller & Crandall, 1998: 210). (Weick, 1999, 802)

Disciplined reflexivity and the conscious involvement of 'the whole self' in the research process (RTS 2.19) can bring a sense of transformation for the researcher. Personal meaningfulness of research is increasingly being acknowledged in contrast to the detached mode of inquiry that has been highlighted in the past.

> Like many researchers, I originally described my research project as a journey. However, as my sociological practice developed, I broadened the metaphor to encompass not one but two constructed journeys. While my research interests clearly focused on the outcome of finding out more about peoples' use of technology as an element of organisational communication, I also wanted to critically explore the research process itself as a complementary journey of discovery. In charting this second journey, I have documented significant moments of the transformation process as I progressed beyond being a novice researcher.(Day, 2002, section 1.2)

Another doctoral scholar observes how researchers often need to deviate from standard, prescribed paths, and how such experiences are liberatory.

> When my research ambitions failed to fit with the purity of methodological options, I found myself searching for alternatives. It made me apprehensive. It required that I progress beyond my comfort zone to consider more creative alternatives. It necessitated a more critical analysis of readings and the consideration of a possible reformulation of my

research purpose. I had to confront myself as both researcher and human, in terms of my values, fears, insecurities, and passions. Thus what essentially began as a simple read of Creswell's book as a pragmatic means to resolve the issue of approach, it evolved into a journey in which I realised that the process of pursing research is inextricably linked to the process of discovering oneself. (Probert, 2006, section 8)

The doctoral journey's potential for such tranformative experiences need to be acknowledged. Doctoral programmes that place the researcher at the centre can aid such personal growth and development. A liberatory vision of research that responds effectively to the twin challenges works along these lines.

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John P. van Gigch, Metadecisions: rehabilitating epistemology. New York, Kluwer Academic/Plenum Publishers, 2003. Pages: xviii + 341. ISBN: 0 306 47458 1.

This book is an attempt to widen the focus of attention in management literature or operations research from dealing with technical or practical problems towards a more integrated method of analysis that takes into account the complete relevant system of which some particular problem is part, inclusive of the perspective of participating humans (humans that are part of the system, that is). External and internal points of view need to be combined for that reason. The book stands in the tradition of systems theory, therefore its publication in the series of *contemporary systems thinking*.

The author focuses on what he calls 'metadecisions' that "go before" or "transcend" the day-to-day decisions that have to be made (to solve some particular problem) and he tries to develop a method of thinking in management science that enables the scientist to have a continuous overview of the complete system in which particular decisions are to be made. A main distinction he makes to this end is to distinguish between Management Science (the science that deals with the scientific problems the field) and the Science of Management (the science that deals with the epistemological (meta)-problems of the discipline). This distinction allows him to introduce epistemology, part of the science of management, into the methods and methodology of management science, something the author claims to be often neglected in the discipline (although sometimes nominally adhered to) and which he claims to be detrimental to the aims of operations research.

Van Gigch argues for his main result, i.e. the rehabilitation of epistemology and a set of thinking tools to use it, in the following way. He first conceives of operations research in a broad way: as designing artefacts, which include social artefacts, for

instance social systems. There can be discerned several levels of abstraction in the process of such design and these levels he places in a hierarchy. This hierarchy plays a large role in his book and motivates the structure of the book, as well as its argument.

The general levels of abstraction (the hierarchy is created by a process of abstraction) are formulated in terms of "inquiring systems". An inquiring system defines the problem to be solved and the method to solve it. With respect to the particular problem that is to be dealt with, the levels are filled with particular content. An example concerning social security is filled with levels pertaining to the decision-making structure of governments on different levels (national, local etc.). An example concerning technical design is filled with levels pertaining to optimisation problems in design, but also (more abstract) levels that discuss the very possibility of optimisation.

1   The most basic level the author distinguishes is the level of the "real world inquiring system"[1]. This level has as its designated problem the production of a selected artefact design.

2   The second level, being "higher" or "more abstract" is the level of "modelling" the problem in which the selection of a design stands central.[2]

3   The third level is the level of "metamodelling". In this level the question is asked how to select a model that can be used in the second level.

4   The fourth level is the "epistemological" level. In this level the sources and kinds of knowledge are questioned that can be used in any inquiring system.

5   The fifth level is the "Ethics & Aesthetics" level, which is the highest level of abstraction and contemplates the work as a whole "in a gestalt" in the author's words.

This is a description of the framework the author conceives the science of management should take place in. This is also the way the author introduces his view. Subsequently he applies this framework throughout the book on many different examples, which are meant to give a feeling of the point of the framework and the way to apply it.

[1] Henceforth I will dispose of the "inquiring system" in the description of the levels.
[2] "Selection" of a design can, according to the author, also stand for "(hands on) designing" itself, because the process of designing also involves "creating a possibility for selection".

I will briefly mention one example to convey the general idea(cf. pp. 57-61). It concerns the problem of identifying problems of social security recipients with increasing cost of living. The first level (real world) concerns the recipients of social security and the employed population. This is the level at which actual problems are identified (i.e. what problems do people have). At level two the (federal[3]) government needs to select a model under which the problem is being treated and solved (i.e. how are the problems solved and how is this organised). The possible solutions are constrained by the particular way government is organized. At level three all kinds of organizations that either have indirect power or have an advisory function play a role (i.e. political and legal advisors, scientists etc.). They try to influence the types of models that can be used to answer the problems (i.e. this level refers to level two and may involve theory formation). Now, the author claims that the next two levels, that of epistemology and ethics & aesthetics are rarely taken into account, neither in practice, nor in theory. This is one thing that he wants to change with this book.

As he describes the epistemological level[4], it should bring resources from philosophy of science and methods of reasoning in order to evaluate the validity of reasoning processes at lower levels. Especially in chapter nine he argues that the epistemological level is very often neglected and not for the best, he even claims that 'A discipline which neglects its epistemology, risks its own demise'. The epistemological level is, in short, the level that is supposed to ensure that decisions at the lower levels are reasoned through and are sound. Also problems and solutions that may be very easily overseen, due to the myopic perspective of a lower level, could be better identified (and hopefully solved) from the higher epistemological level, together with bringing (interpretative and other) resources in from the philosophy of science to bear on the problem.

This concludes my general description of the argument of the book. The book itself is relatively abstract, despite the many examples, because the central argument of the book is to take into account the epistemological level and the ethics & aesthetics level,

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[3] The author takes the United States as his example

[4] I will not go into the ethics & aesthetics level, but most remarks about the epistemological level apply, *mutatis mutandis*, to that level.

which are abstract levels of inquiry. He tries not so much to give a practical toolkit for dealing with problems, but to make the worker in the field aware of an area of relevance to his work about which the manager or scientist him- or herself needs to think about and take into account in dealing with problems of (human) systems engineering.

I conclude this review with some critical remarks about the book. Notwithstanding the interest I have in this topic and, as a philosopher of science, my sympathy for an appeal for attention to epistemology and philosophy of science, I have great reservations about the argument of the book. The main problem concerns the way the author conceives of the hierarchy of levels and I will restrict my remarks to this aspect, since it forms the heart of the argument.

As I said, the argument depends on the hierarchical model discerning five levels of abstraction. It is, however, very doubtful whether the model in its present form can be maintained. This has two reasons. In the first place the placement of a level in the hierarchy is generally arbitrary and in the second place the placement of a particular decision in a level in the hierarchy is arbitrary.

An example of the first type presents itself very soon in Van Gigch's story. As we saw above, he claims that the ethics & aesthetics level is the highest level in the hierarchy and one level below is the epistemological level. The epistemological level is concerned with applicable sources of knowledge and modes of reasoning. They provide partly the methodological tools for the actual scientific work.

(As an aside: Gigch claims that epistemology is concerned "with providing a guarantor for Truth". This is a very strange and dubious claim. He gives no argument nor provides us with evidence for the claim. Certainly no philosopher working in the field of epistemology would endorse this claim; epistemology is not concerned with guaranteeing truth, it is concerned with identifying sources of knowledge and justifications of (defeasible!) knowledge. I suspect the author confuses the correct statement that normally truth is seen as a necessary, but not sufficient, condition for knowledge with the claim he himself makes. This error is telling, though, because throughout the book the author makes unfounded claims like this that are hard to confirm and often very problematic.)

To return to the problem about 'levels', the higher level (ethics & aesthetics) is supposed to evaluate the lower level(s), among which the epistemological level: ethics & aesthetics is on a more abstract level of consideration than the other levels. However, we read in the description of this level that one of it's tasks is to '... identify sources of knowledge ...” (p. 16). Earlier in the argument, concerning the (lower) epistemological level in the hierarchy we read this its task! Is epistemology now simultaneously on a lower and a higher level of abstraction relative to ethics & aesthetics? This is bizarre, also because the author gives no argument for his particular choice of levels and their placement. He simply states it, but gives no argument. This amounts to a dubious form of arbitrariness.

In fact these troubles are no surprise for the reader who is familiar with the source of this way of introducing levels of abstraction: Bertrand Russell's theory of types. This theory, as Van Gigch acknowledges, was developed in part to counter linguistic paradoxes, such as the paradox of the liar. However, this view soon came under attack, precisely because there are no general criteria that provide the reason for a statement (or a property in Russell's theory) to be in the one, rather than in the other level. There are theoretical ways to counter these problems, but they are very complicated and domain dependent. Van Gigch gives no evidence that he sees this problem, let alone counters it.

The second reason that makes the theory of the book very problematic is the way the author deals with the details of the model; this has to do with the way a decision is placed in a level of the hierarchy . Supposing that it is possible to define the levels of abstraction in a non ad-hoc and consistent way, it is still problematic to place a given problem of research within a certain level. Is making a law for social security in a democratic society a question of modelling or meta-modelling? Or is it a practical problem? It seems that this depends very much on your perspective. For a social worker in the field the problem is a relatively abstract problem with regard to the practical problems he or she has at hand. For someone in the legal field, making a law and thinking about its implications may very well be a very practical problem. This is not to deny all differences between types of problems, which may very well be elucidated by introducing a hierarchy of levels, but the author provides very little in the way of giving a

consistent and non-arbitrary way of dealing with these questions. The main answer he gives is: "we need to think about it", but that is not much. Therefore, in the end the book leaves us with very little content, but only the message, which I sympathise with, that we need to think beyond our normal ways of thinking and involve larger theoretical insights into our day-to-day dealings with practical problems. But I am sceptical about the question whether we need 300+ pages for that one message.

Pages that are, to conclude, very hard to read, due to the horrible type-setting in the book. Continuously *sentences in italics* are ALTERNATED WITH PARTS IN CAPITAL **with sentences in bold** and statements that are normal at *an* extremely **high** rate. The whole function of these typographic means gets lost in the barrage of different letters. This doesn't help the reader very much, to say the least.

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As an insider within the recent field of science studies, Steven Yearley is well-placed to show how any sociology of modern society that aspires to legitimacy has to confront issues of science and technology head-on. In this his latest book, *Making Sense of Science* (MSS), the author takes as his primary duty the explication of science-in-society (MSS, xiv) by uncovering what Latour (1992) has labeled the 'missing masses'—non-human actors that participate in the functioning of human societies. It is precisely because these beliefs, representations, artifacts and other byproducts of science are so commonplace now that they have become unproblematic or 'black-boxed' to use another one of Latour's neologisms. It is only when trouble or breakdown is experienced such as in disputes over nuclear safety, court judgments in the O. J. Simpson trial or the emergence of new disease outbreaks that these missing masses become thematic. Accordingly, MSS is divided into two main sections: (a) an examination of the sociology of science and its practices within scientific communities, and (b) sociological analysis of scientific communities interacting with society. A moment's pause will reveal the logic of this way of argument for the outcomes of science enter not just into circuits of consumption, production and exchange within scientific arenas but also slip into/from wider society as well.

Trying to make sense of science is certainly not a peripheral concern in everyday life; as I write this review the headlines of the local daily announce that toxic chemicals have entered the food chain through contaminated salmon in a local fish farm (McCulloch 2005). Although not deemed an acute health hazard due to the supposedly massive quantities of fish that have to be consumed before a lethal dose is reached, the public was neither informed nor were all the fish successfully recalled from distributors.

In fact, about 97% or over 36 tons of tainted salmon were sold worldwide and probably already consumed. It is precisely because of controversies like these that make reading MSS invaluable for it foregrounds the inherent tensions concerning scientific expertise, risk, credibility, ethics, and law.

The author would agree with me that if this incident had happened fifty years ago, it is likely that the public would had passively accepted the assurances from the government or the biologists employed by the aquaculture industry. In part, this is the powerful mystique and distinctiveness of science, which many people even now continue to uphold and is discussed in chapter one of MSS. This authority was however shattered in the nascent field of science studies with the oncoming of the Strong Programme and the Empirical Programme of Relativism in the 1970s and 1980s. These critical stances or what Yearley calls 'framing commitments' about the inner workings of science are complex although the author nicely summarizes these debates in the second chapter without adding too much unnecessary detail. This ability to clarify the main issues at stake using the minimal of references was one very attractive feature that I found in MSS.

What follows next are five substantive chapters that articulate the major schools of science studies. Yearley began with looking at interests: People make claims based on interests and that problems arise when interests conflict. While beset with some theoretical loopholes, interest theory is easily appreciated and intuitive hence promising much to furthering the sociology of science. Actor Network Theory and feminism are not forgotten as well. Indeed, both seem obligatory given their far-ranging implications for how one views the world; the former blurred the distinction between human and non-human actors whereas the latter alerted us to how science had often favoured one gender. Less well-known and accepted as research methods in science studies are ethnomethodology and the analysis of discourse in chapter 6, whose followers share a concern with making the familiar strange in different ways. I appreciated the next chapter on reflection, explanation and reflexivity in science studies. Here, Yearley demonstrates his insider status in the field when he competently assesses the strengths and weaknesses of the various schools of science studies. From his perspective, he suggests that there have been a few important accomplishments arising from thinking sociologically about

science: (a) people ultimately decide on what counts as knowledge—the claim of finitism, (b) truth is decided as collectivities, and (c) trust and judgment are vital for knowledge claims.

The third and final part of the book seemed most interesting and practical to me as it dealt with how science studies interacts with everyday issues. This section opened with discussing how the understanding of scientific expertise and institutions among the public was more complex than originally thought. For example, rather than possessing inadequate or incorrect knowledge among non-scientists, the question should be framed in terms of public trust in scientific matters and competition with rival forms of local knowledge. The next two chapters on risks and science in law complement each other. Building on the insights from Ulrich Beck and others, Yearley maintains that public faith is now usually placed on the reliability of apparatuses and institutions of science to minimize the predominantly human-made hazards that confront society. Naturally, this dovetails into issues of law and ethics when things go awry as they so often do when nature 'bites back.' This is where MSS suggests that science studies again can offer greater sensitivity into these conundrums that have no precedence in the history of humankind. At the same time, it would be foolish to deny the huge difficulties that science faces as it engages in policy-making. What is needed according to Yearley in chapter 11 is to analyse the co-construction of the natural and social order instead of concentrating on better scientific advice and delivery modes. After discussing and then rejecting the more extreme postmodern attacks on science (e.g., the so-called crisis of representation), chapter 12 revisits various aforementioned themes and concludes the book with a reminder of the value of the sociology of science for everyone.

Overall, the book is informative and covers its two main objectives adequately without being overwhelming to the beginner. I tend to see MSS akin to a tasty, well-prepared appetizer that prepares the way for more substantial courses to follow once the reader is prepared to do so. Although two GJSS reviewers judged MSS as an evaluation of the field that was written for peer audiences, I found it rather textbook-like albeit with an emphasis on how science interacts with societal concerns (i.e. the final section). My reasons for taking this viewpoint is that the organization of MSS is scaffolded for ease of

learning by the generalist reader; introductory material first on the nature of science and science studies followed by a survey of the canonical vantage points and finally illustrating specific issues or case studies about science in the everyday world. Besides, the backcover of MSS cited an academic advertizing that she would "certainly use this book as one of the course texts" while the publisher touted MSS as the "ideal guide to science studies and social theory."

Would it be sufficient beyond the basic levels? My response is in the negative for the fly in this otherwise fine ointment is that the coverage (i.e. of the theory and practice of science studies) is spread thinly here across 186 pages of text. Advanced students would thus be better served by referring to more specialized resources in the sociology of science (e.g., Hess 1997) or material relating to science studies at work (e.g., Irwin and Wynne, 2004) that MSS single-handedly attempts to manage. This balancing of the twin goals of the author mentioned in the first paragraph is evident when we compare MSS with another introductory text such as Sismondo's (2004), which covers more ground as a whole but devotes only a single chapter to expertise and the public understanding of science. Coverage of my personal interest in the social shaping of technology was somewhat neglected in MSS. It was not missing in the text per se although a reader less familiar with the literature would find it difficult to find explicit connections here. These criticisms should however never detract from the worth of MSS that provides fundamental insights to help us distinguish between facts, beliefs, and ideology in one of the most exciting aspects of sociology at the moment.

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Wayne Martino & Maria Pallotta-Chiarolli**.** So What's a Boy? Addressing Issues of Masculinity and Schooling**.** Open University Press (McGraw-Hill Education), Maidenhead (and Philadelphia, PA), 2003. Paperback. 22.99 UK pounds. pp: 310. ISBN 0-335-20381-7

Summary

School life is structured by norms and amongst the central norms are those of masculinity. Authors Martino and Pallotta-Chiarolli discuss themes - homophobia and racism - that are relevant to themselves. Their own experience and their interviewees' insights unravel normalising practices and may help to educate boys better.

Over the years, the way 'gender' is understood by social scientists has developed from something of a 'biological' to something of a 'cultural' perspective (compare Smiler, 2004). Gender is much more than a biological category that describes a position people have from birth on - male or female. Gender is also more than a social role that a person is taught by others to play, a position that people are made to fit into. Gender is made by people. It is not a structure immune to change: each person shapes his/her own gender and helps shape gender in general. Social-economic status, race and culture differentiate within gender. People experience the configuration of gender - nature, socialisation and choice - as a set of expectations and norms that they can live up to without much conscious thought, that restrict their behavior, or with which they can play. The possibilities of gender in late modern society - multiple masculinities and femininities - can be seen as opportunities for individual development and happiness. These possibilities can also be seen as confusing and full of risk. The possibilities of gender, their opportunities and threats, are in full view during late childhood, adolescence and early adult life. When I took up the book *So What's a Boy? Addressing Issues of*

Masculinity and Schooling I expected to learn more about people who shape their masculinities.

The authors state to have interviewed 150 boys from 11 to 24 years of age, over a period of three years. The interviews were semi-structured by the following questions:

- "What does being a boy mean to you?"
- "What is school like for you? Do you experience any problems?"
- "What do you like about school?"
- "Can you talk to us about your friends, teachers, family and their influence on you?"
- "What subjects do you enjoy/dislike? Why?"
- "Are you experiencing any pressures in your life at school?"

To me, these seem to be good questions. The authors spoke with indigenous, Asian, Italian and white Anglo-Australian boys, from both rural and urban locations. They spoke with, for instance, victims of bullying as well as with bullies. Martino and Pallotta-Chiarolli were assisted by, amongst others, an organisation of parents of gays and by representatives of Aboriginals/Torres Strait Islanders.

The authors desire space for boys' voices. They want to counter a trend they perceive: a trend to understand boys as ' victims' of their biological sex. The semi-structured interview seems to be the right method to make boys' voices heard, but the authors provide no justification for this method. Did they consider other methods? And except for their explanation of 'borderland existences' (see further on), Martino and Pallotta-Chiarolli hardly engage with the corpus of literature on schools, socialisation and gender (I assume they do so in other publications of theirs).

Quotes from interviewees are inserted into the text throughout the book. That is interesting material to read and it should support the argument. Quotes are used in this way by for instance William Pollack (1998), Janita Ravesloot (1997), Koolhaas & Maris (1992) and Eric Marcus (2002). As I soon recognised names and stories in *So What's a Boy?*, I felt that the transcripts of only a dozen of the interviews were used to illustrate the argument. Was this done to provide the interviewees with more 'face', as a service to

the reader? Or should I doubt the quality of other transcripts? The authors ought to have explained that.

The book consists of three parts. Part I is titled "Normalization and Schooling". The first chapter explains the research perspective of normalising practices and borderland existences. The expectations and norms of social practices are usually not perceived as regulatory or repressive. Schooling is in that sense not problematic, the contrary is often true: its normality is familiair and safe. Only under extraordinary circumstances are normal practices felt to be restrictive. If, for instance, a boy's mother dies and his emotions are not to be showed in school after the burial has taken place. From a position at the margin of normality the workings of expectations and norms can be observed. Disabled, homosexual and coloured people can actually feel how society is structured and they can be highly aware of their construction of identity. Martino and Pallotta-Chiarolli explain that their perspective of normalising practices and borderland existences draws on feminist and postcolonial theories and on Michel Foucault's writings. I quote from the first chapter:

"This focus draws attention to ways in which boys learn to police their masculinities and to place themselves (and other boys) under a particular kind of surveillance. In other words, we are interested in boys' understandings of what constitutes 'normal' or desirable masculinity and how they learn to fashion and embody this masculinity in socially acceptable ways." (p. 3)

"Versions of masculinity and their relationship with other factors - such as ethnicity, Indigeneity, socio-economic status, rurality, sexuality, disability - are understood, therefore, as a set of self-fashioning practices which are linked to normalizing judgements and techniques for producing culturally and historically specific forms of subjectivity." (p. 6)

The three following chapters in Part I are on bodies, harassment and friendships. Part II is titled "Diverse Masculinities" and there the authors discuss homo- and bisexuality, cultural backgrounds, indigeneity and physical disabilities. Part III is titled "Sites of

Intervention". There the authors show how boys themselves interrogate masculinity in schools. Martino and Pallotta-Chiarolli further discuss school structures and pedagogies, the polarity between the courses of English and physical education, and health education. In their conclusion they provide school managers, teachers and others involved with the implications of their findings, to make schools aware of how they do and how they might educate boys.

The authors succeed to make clear that in the case of Australian boys' education 'normal' is not necessarily good, or not good for everybody. Their eyes for borderland existences work well to unveil how social structures are experienced. This book by Martino and Pallotta-Chiarolli can help to improve the education of boys, even if it does not in detail indicate how change in schools can be realised.

The authors start their chapters, before the actual introductions, with a personal reflection on the theme dealt with in the chapter, or with a description of an empirical observation and their experience of it. This helps the reader to trace back and understand the arguments and the message that the book contains. In their explanation of narratives Martino and Pallotta-Chiarolli refer to Lather (1991) and Game & Metcalfe (1996). I provide part of the text at the beginning of the chapter concerning bullying and harassment:

"He strides in, and even as I'm indicating the chair facing away from the windows, he is scraping another chair into position so that he is fully in sight of anyone in the library as well as able to scrutinize me from a sideways angle. Outside, there is a steady stream of fans grinning, pointing, waving, eyes shifting suggestively between him and me. He responds with exaggerated grins, hand and finger signals signifying 'Fuck off' and shooting a gun. Occasionally he doesn't respond to a question or loses concentration when he becomes immersed in the mutual displays and camaraderie. I stop asking questions and sit quietly observing. The boys outside the window indicate to him that I'm watching. He turns to me. 'What's up?' 'What are you doing?' 'Just mucking around.' 'Why?' 'They're watching me. They're waiting for me to do it. Anyway, that's what normal boys do.' I end that interview as well. I meet with the principal and organize a more private room in the admin block." (p. 33)

The following comes from the text at the beginning of the chapter concerning sexual diversity:

> "The interviews confront me with effects of the straight gaze that is continually directed to those who dare to name their non-normative sexuality or to appear different in their bodily enactment of masculinity. And yet in writing about sexually diverse boys, we want to shift this normalizing gaze away from the Other and to fix it firmly on those who have the power to classify and objectify. Homophobia after all is about regimes of heterosexuality and those who have the officially sanctioned power to diminish and pathologise the other. Homophobia is about heterosexuality and normalization - it is about compulsory heterosexuality." (p. 75)

Author Wayne Martino is senior lecturer in education at Murdoch University, Perth, and he has worked as a teacher in different secondary schools. He is gay. Author Maria Pallotta-Chiarolli is senior lecturer in social diversity and health at Deakin University, Melbourne. She has an Italian background, she is a heterosexual feminist and a mother. Authors' identities matter, that goes for the book under review and it goes for this review as well. I have volunteered with a gay rights organisation: I was one of the public information officers who went to secondary schools to inform classes about homo- and bisexuality, who were there to answer questions and open some discussion. I am gay, but I never felt that it sufficed to present myself as such to a class. I always had more to say about gender in general, about the specific expectations and norms for men and women, about consequences for thought and behavior. To combat discrimination against people with alternative sexual orientations is one thing, to change the main body of society seems to me the real challenge. My own secondary school days were not the happiest of my life, but I was not a permanent victim of harassment and I am not traumatised in any way.

Another thing needs to be said about the authors of the book and about myself. They are Australians, writing about Australian society, its schools and boys and for an Australian public. Martino and Pallotta-Chiarolli make clear that Australia is the country

of beer drinking mates who are into football, perhaps cricket.[1] I am Dutch, I live in one of the few countries that has made possible same sex marriages. And I was warned: here in the Netherlands I had an Australian colleague and one of the reasons she left her country is that she considers its politics to be narrow-minded and repressive. What the book's intended public may think outrageous, may seem obvious to me.

Furthermore, let me state that when I started with the book I did not expect it to centre around homophobia. Neither title nor the publisher's text on the back make that clear. It says, for instance: "How do issues of masculinity impact on boys from culturally diverse backgrounds, indigenous boys, those with disabilities and boys of diverse sexualities?" I am 'of course' indeed gay and not disabled or an immigrant, but, honestly, the book highlights masculinity as heterosexual and its protagonists as homophobic. In that light, disabled boys mostly do not live up to the ideal of masculinity because they are perceived to be weak, feminine and therefore amongst those boys who are into drama, literature or effiminate, generally. Such views are held by boys, the pupils themselves. They are facilitated, if not encouraged even, by (Australian) schools and society at large: sports and heterosexual male physical performance are on a pedestal.[2]

Martino and Pallotta-Chiarolli show that power is at play in the relations between different boys. They also discuss the importance of sports in (Australian) society. They analyse masculinities at the levels of individual boys, peer groups and schools. Their discussion might fit into a higher level frame of analysis. Using Robert William Connell's concept of 'hegemonic masculinity' it can be said that the ideal of masculinity that disabled and homosexual boys do not live up to is related to the domination of men over women in society. Demetrakis Demetriou (2001), inspired by Antonio Gramsci, refined Connell's concept to a 'masculine bloc'. Demetriou explains that Connell failed to recognise how the ideal masculinity of white heterosexuals interacts with the marginal masculinities of homosexuals and coloured men. Even those men who do not share in the hegemonic masculinity benefit from patriarchy, they are willing to form a bloc that

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[1] Another scolar who states how important sports are within Australian hegemonic masculinity is Robert William Connell (1992). He describes how young gays follow a life course outside the dominant social pattern, but do not actually challenge the existing gender order.
[2] See further Messner (1992), Sabo & Runfola (1980), Dunning (1986) and Frey & Eitzen (1991).

supports patriarchy. An interpretation of boys and schools along the lines of Connell and Demetriou might resemble the way Hua-Fu Hsu (2005) interprets inmates, guards and a prison along those lines.

As I see it, masculinity is worthy of research (compare Traister, 2000) and worthy of care. Power, violence and destruction are still much celebrated in the world and domination is equalled to success, not just in historical work by someone like Ernst Jünger but in everyday practice. Just think of drinking and driving. I find this regrettable. However, outright attacks against masculinity, as from radical feminists, are not very helpful. Nor does it help boys to construct a balanced identity if they have to spend their early years in feminised environments, with mostly female caregivers and teachers and with school rules that prohibit moving around and physical exploration - to sit still, to listen and to speak suits girls better. Boys are likely to 'share' by acting in concert, girls are likely to 'share' by speaking together (see for instance Pollack, 1998). In recent years, some people feel that in the Netherlands boys 'as boys' are somewhat neglected. Many teachers and most caregivers are female. School norms define a pattern of behavior that seems to suit girls better than boys (see for instance Bierens, 2004). And girls do better at school. Some programmes have been developed that allow boys to express themselves in ways that suit them, even if girls may find those ways too noisy or violent and if mothers or teachers may find them unruly. Such programmes assume that if boys are allowed to shout and run at times, and if some competition is built into the curriculum, the boys will be better pupils. Their way of learning would be recognised. I agree that extreme male behavior should be kept in check, but masculinity does have its value (both use and intrinsic value). For instance, according to Barrett & White (2002) masculinity seems to protect against depression. Male identities need to be nurtured and discussed in order to reach forms that neither threaten others nor deny male nature.

It might be surprising to readers, but 'good' masculinities might even be realised in sport. There are particular sports, clubs, groups and/or individuals with whom competition is merely friendly, and masculine power supportive. Laurence de Garis (2000) describes such a boxing gym. The research I would welcome as supplementary to the book by Martino and Pallotta-Chiarolli is an evaluation of different training

programmes that aim to make schools aware of sexualities and create safe, supportive and pleasant school cultures. Please design, execute and evaluate such programmes. This requires the cooperation of pedagogues, psychologists, sociologists and policy scientists, not to forget school managers, teachers, parents and pupils themselves.

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W. Richard Scott (2003) *Organizations: Rational, Natural, and Open systems*, Prentice Hall, Upper Saddle River, New Jersey, fifth edition, 47,50 €, ISBN 0-13-016559-X, 430 p.

I had high expectations for Scott's *Organizations: rational, natural and open systems* (2003). The very fact that this is the "fifth edition" (the first edition was published in 1981) points to the influential status of this book, as also testified by Scott's impressive career as organization sociologist. Despite these promising conditions, however, the book does not fully live up to my expectations.

Scott starts from the argument that it is very important for scientists to take notice of organizations: "Organizations play a leading role in our modern world. Their presence affects virtually every sector of contemporary social life" (2003:1). For this reason it is not surprising that organizations are being studied very intensively. Nevertheless, the author argues that his book differs from other organization books in several aspects. First, it is easily accessible for readers with different academic backgrounds whereas most other books are too specialized. Second, the author argues that he introduces new ideas, without renouncing to traditional theoretical concepts. Third, the author relies on a sociological macro-approach of organizations. Finally, Scott aims at a broad audience from academics and students to practitioners.

Although Scott rightly highlights the importance of the environment within the study of organizations: "No organization is self-sufficient; all depend for survival on the types of relations they establish with the larger systems of which they are part" (Scott, 2003:23), his macro-level approach to study organization (i.e. as collective entities) is debatable, because it severely narrows down the focus. Then, in line with the sub title of his book, Scott works out three ideal typical perspectives on organizations: organizations as rational systems, organizations as natural systems and organizations as open systems.

Although these categories are certainly not new, the comprehensiveness of the discussion is very valuable.

Within the *rational perspective*, organizations are seen as strongly formalized entities aimed at the fulfillment of specific goals. Within this mechanistic approach toward organizations, the formal structure is emphasized. However, within the *natural systems approach,* organizations are seen as fundamental social collectivities attempting to fulfill their own individual needs. The natural system theorists put a greater emphasize on the informal and social structure of the organization as well. Finally, the *open system approach* pays particular attention to the reciprocal ties and the mutual dependence between organizations (with different interests) and the environment. The open character of the system is the most important difference between this and the other two previous perspectives. According to Scott, this theoretical division uses ideal types which "partially conflict, partially overlap, and partially complement one another" (Scott, 2003:31). This statement is not problematic in so far as the perspectives are not presented as mutually exclusive. However, Scott takes the view that an attempt to integrate these perspectives is necessary. This seems to conflict with Scott's original intention to specify distinct perspectives. Scott compromises the potential strength of his book with his apparent inconsistent choice in the remaining (main) part of his book.

Scott's attempt to combine the three perspectives is not in line with the chosen format in the first part of the book. His so-called Layered-model has two dimensions, namely "closed versus open" and "rational versus natural". The 2 x 2 matrix that can be extracted from this model contains four types of organizations: closed-rational, open-natural, open-rational and closed-natural. Then Scott follows (from chapter five) the line of reasoning from his integrated model instead of the triple perspectives that have been discussed in the previous part of the book. The author is right in making the distinction between different perspectives in order to get a sharper view on organizations, but after having done this in a fruitful way in the first part of the book, he suddenly puts the different perspectives together in an artificial way. The consequence of this inconsistent exercise is a blurred picture of reality.

The layered-model does not escape criticism either. The choice of three 'influential' perspectives, as the base of the integrated layered-model is insufficiently defended. Arguments for possible other perspectives are mentioned only in a footnote (on page 31). This is regrettable since other perspectives, such as the cultural approach, would have resulted in other useful models. Chapter 13 describes organizational effectiveness. However, attention for a connected theme, organizational legitimacy, is missing. This is an omission given the actual relevance of the (normative) theme of legitimacy. On the other hand, some chapters seem to cover too many topics (given the classroom focus of the book). Despite these critical remarks, one has to recognize that this book contains a broad overview of actual organizational theories and (scientific) discussions. The impressive bibliography challenges readers to engage in further reading and reflection. Although every chapter ends with a short summary, a reflective final chapter would have been of benefit to the reader. The last part of the book is pleasingly surprising, because the society and not organizations, is used as a frame of reference.

Despite my criticisms, this book would belong on the bookshelf of students, researchers and practitioners with different academic backgrounds.

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Looking for knowledge productivity

Van Aken, Teun & Van Engers, Tom M. (Eds.) (2002) *Beyond Knowledge Productivity. Report of a Quest*. Utrecht: Lemma: 250 pp. ISBN 90 5931 126 4.

Management is often equated with control and therefore seen as undesired. So, when the knowledge management debate started in the early 90s, several organisational learning and human resources academics and practitioners felt uncomfortable with its emphasis on management control and management systems. For that reason, they decided to develop the phenomenon of knowledge productivity, which focuses on how organisations can make their knowledge work. In 1997, a group of Dutch and British academics and practitioners established the Vanwoodman Society which supports the development of knowledge productivity and organises yearly seminars. An impression of seminar results from 1997 to 2002 is published in *Beyond Knowledge Productivity*.

The 17 authors of *BKP* were all seminar participants, some of them are board members of the Vanwoodman Society and most are probably members of this organisation. However, the authors do not necessarily share the same views on knowledge and knowledge productivity. Nevertheless, most of them define knowledge as an ability, and therefore as non-epistemic. Additionally, the authors differ in the way they approach the subject of knowledge productivity. Some focus on individual learning, while others concentrate on team learning. Their views have in common that they are situated in the context of the organisation, with the result that knowledge productivity is transformed into a synonym for organisational learning. This is not a surprise, as organisational learning is also the common basis of the disciplines that the authors

represent: organisational sociology, human resources, psychology and education. The result is that *BKP* is best viewed as the result of a multidisciplinary approach.

The transformation process from knowledge productivity to organisational learning originates from the views of the person who is the driving force of knowledge productivity in Europe: Jos Kessels, professor of human resources development at the Twente University in the Netherlands and partner of the consulting firm *The Learning Company*. According to Kessels, knowledge and people cannot be managed, because he defines knowledge as 'the ability of an organisation, a team, or employee, to signal relevant information and to develop new competencies, that are applied to the incremental improvement and radical innovation of work processes, products and services'. More succinct, knowledge is 'an ability to act competently' (Oldenkamp). As abilities can only be influenced and not managed, therefore knowledge can not be managed. The result is that Kessels emphasises that the best organisations can do is to create a learning environment, which is reflected in his *BKP* contribution, in which he presents two images of organisations: a top-down controlled machine and a bottom-up developing organism. The machine image represents the knowledge productivity approach of Kessels' opponent, the American management guru Peter Drucker, who treats knowledge productivity as a management issue and defines knowledge as epistemic and explicit. And obviously, Kessels supports the contrasting organism image.

Kessels' preference is a natural choice for someone who strives to develop a new field. However, Kessels and his co-authors did not manage to avoid the disadvantage of this strategy. They focus too much on only one side of the coin and only treat organisations as environments which have to stimulate the learning process of professionals. They tend to present organisations as the territories of highly-educated professionals, who should not unnecessarily be disturbed for mundane activities or administrative rituals, nor do such workers seem in need of other people to motivate them. Moreover, the authors do not mention organisations with problems like lack of money or customers. In this way, they overlook that learning environments also need a good organisational structure and a robust administration, which traditionally are the deliverables of well-functioning management.

Notwithstanding the above, one of the central themes in *BKP* is the issue of control. For example, according to the authors of 'If it's so easy, why doesn't it happen?', Bob Garvey, Stewart Martin, and Bill Williamson, who are lecturers at UK universities, the current dominant mindset in organisations is managerial rationality, which is based on control. It is a very strong mindset, which explains why managers do not change to the new knowledge productivity mindset, which stresses thinking skills, dialogue and learning. The seminar participants agreed with this analysis, however, they thought that the authors should be more radical. Instead of challenging the current dominant metaphysic based on rationalism and utilitarianism via its own language, the authors should try to develop a new language. Philosophically that is a logical step.

Possibly, such a new language can also solve the authors' lack of differentiation between renewal of knowledge and organisational renewal. The first is the result of a learning process. New knowledge is a necessity for organisational survival and this is what the authors generally refer to. However, they often implicitly treat the results of learning processes as a synonym of organisational renewal, with the assumption that the latter is equally good and necessary for survival. Unfortunately, organisational change processes often become a goal in itself. They do not necessarily succeed and have often resulted in the breakdown of organisations, as many failing innovations, mergers and acquisitions have illustrated. For that reason, the authors need to treat organisational renewal with a more critical attitude.

Generally, the authors of *BKP* view knowledge as situated and therefore also as constructed. Several contributions, like 'If it's so easy, why doesn't it happen?', point out that in order to learn and construct knowledge, dialogue and reflexivity are crucial activities, as the observer's position cannot be neutral. Consequently, the authors also apply it on knowledge productivity, which leads to interesting reflections. For example, the contribution of Stephen Gibbs, human resources management lecturer at the University of Strathclyde, Glasgow, Scotland, applies his concepts for a good ecology for learning on the seminar itself. The basis of his concepts is that knowledge productivity practitioners are confronted with situations which range from totally free to completely prescribed and therefore, they have to be able to work with concepts which range from

one extreme to the other, like, reflection and action, fun and seriousness and dialogue and monologue. The first two pairs are easily recognised in the seminars, but Gibbs critically noted that dialogue was still problematic. It was supported in theory, but most presentations appeared to be monologue pitches for consultancy work.

At first, reading *BKP* is quite confusing, because the contributions vary from proposals to philosophical arguments and workshop reports. Additionally, the introduction does not help much, because it hardly gives any information about the context and background of knowledge productivity. Furthermore, reading is often troublesome because of the large number of spelling mistakes and Dutch-English expressions. However, the articles are a source of inspiration, as they do reflect the enthusiasm of the writers and the fun of the participants very well. Furthermore, the unstructured variety of articles challenges readers and as the book does not present a ready-made framework for knowledge productivity it gives readers freedom to decide themselves what knowledge productivity should be.

This leads to the conclusion that for university courses, *BKP* is best used as a collection to select articles as appropriate. Especially the more reflective articles are suitable as illustrations of the knowledge debate. For example, the article 'If it's so easy, why doesn't it happen?' illustrates how mindsets are linked to language and the article 'Learning how to learn' from Alasdair Ross, human resources professional at Trafficlink, a national media company in the UK, illustrates the relativity of learning models. The contribution from Joep Schrijvers, lecturer at the Dutch management centre De Baak, 'Let them despair - a narrative approach to knowledge productivity', is a very imaginative article about the importance of the ability to create new stories in order to learn. Some of the articles in *BKP* have become outdated, for example, Kessels' ideas are now developed more thoroughly. And when students need to know more about team learning, they are better off with a reference to a handbook or reader instead of the article in *BKP*.

Finally, the authors reflect on what should be the follow-up of *BKP*: 'Another book, of course', but they do not specify what such a book should cover. One possibility is to continue in the philosophical direction and to refine and renew knowledge productivity concepts. A direction which is more congruent with knowledge productivity

ideas about situated practices and knowledge and therefore more preferable, is to discuss case studies and conduct research. By confronting knowledge productivity theory with results from various practices and developing it further, most of the objections against knowledge productivity which are mentioned in this review will probably dissolve. So it is not a coincidence that since 2002, knowledge productivity academics have conducted organisational research, as is illustrated by their publications in the Dutch *Kennisproductiviteit* (2004), by Christiaan Stam (ed.). This leads to the conclusion that ultimately, also knowledge productivity is a story. As Schrijvers defines it: a story does not necessarily reflect reality, but it is a construction of the people who are involved in it. A new story is intended to cause disruption, so it will lead to new experiences and events and consequently, people will learn and create new knowledge productivity stories.