

A Critical Exploration of Objectivity and Bias in Gambling (and Other) Research

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The authors re-visit the basic premises of various research orientations, ranging from positivism to social constructionism, in relation to the conceptualization of the subject for study, the stance of the researcher and the associated normative research approach. Gambling research is briefly examined through the lenses of some of these various research orientations. Thereafter, a more detailed examination of the premises and methodological approach of positivism, as dominant within gambling research, and the associated natural science discourse is provided. This provides the foundation for an in-depth critique of this approach, especially in the context of industry funding, support and direction. The authors conclude that the utilization of a range of research strategies is required, and especially those that help us understand people in their social environments. They also argue that researchers are obliged to be familiar with current scholarly debates about the nature of the world and the foci of their study and methodologies that are duly congruent with the nature of what is being studied.

Keywords: Constructionism; Epistemology; Gambling research; Positivism; Research methodology.

Introduction

Although a multitude of gambling research reports have been published, especially over the last decade, very few of these have specifically addressed issues of *ontology* (i.e., the theory or philosophy about the nature of being), *epistemology* (i.e., the theory or philosophy about the nature or basis of knowledge), and *methodology*. In particular, psychological research and researchers tend to take such issues for granted, using various conventions of method rather than offering reflective statements of methodology; indeed, the *logos* of the methods applied to the research problem. In this paper we intend to (in part one) re-visit the basic premises of various research orientations, ranging from positivism to social constructionism, in relation to the conceptualization of the subject for study, the stance of the researcher and the associated normative re-

search approach and with reference to the accompanying grid. We then briefly look through the lenses of some of these various research orientations for an examination of gambling research.

Following this broad “Cook’s Tour,” we focus, in part two, on a more detailed examination of the premises and methodological approach of positivism, in particular, and the associated natural science discourse. This provides the foundation for an in-depth critique of this approach, in part three—especially in the context of industry funding, support and direction. We then conclude, with some suggestions for future research on human beings and the human world as applied to gambling practices.

Part One: Ontological and Epistemological Premises of Main Research Approaches

The following overview has no pretensions at being complete; it also may be read by those who are more familiar with the philosophical debates about research as pretentious or overly generalized and homogenized. Our intention is to offer an entry point for readers, in-

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viting them to join us in the reflective trajectory we go through when ascertaining the appropriateness of pieces of gambling research (both our own and those of others) and the relevance of their findings for individuals, communities and societies.

Positivism (Empiricism)

Knowledge is based on observation and direct experience of phenomena in the world by the supposedly objective and value-neutral scientist, who stands above or apart from the phenomena under study. The broad aim is to uncover universal laws to describe and predict the relationships between the observed phenomena. Within this framework, facts about the world may be isolated and subjected to scientific observation. Alston and Bowles (2003) note, this model, as applied to the human and social realm, has been patterned after that commonly used in the natural sciences since the sixteenth century. Ironically, more recent developments in the natural science disciplines (e.g., quantum physics and biology; see Capra, 2003, for good summaries and references) continue to question the usefulness and relevance of this essentially mechanistic and reductionist model, whilst the mainstream in social and psychological research continues to pursue the (presumed) classical approach to science and research. Alston and Bowles (2003) give a succinct overview of this approach and its assumptions:

[Positivist research] is based on the idea that there is an objective “reality” which can be accurately measured, and which operates according to natural laws which can be “discovered” by rigorous objective research. (Marlow, 1998; as cited in Alston & Bowles, 2003, p. 7)

Just as a natural scientist in the nineteenth century might examine a rock and test its properties, so it is assumed that a social scientist can “objectively” study a group or social system. (Sarantakos, 1998; Babbie, 2001; as cited in Alston & Bowles, 2003, p. 7)

It is also assumed that the effect of the researcher’s own presence is minimal or non-existent, so that “pure reality” can be studied. That is, it is assumed that whatever the researcher is told, or observes, would actually be happening, whether they were present to observe it or not. (Mark, 1996; as cited in Alston & Bowles, 2003)

Research into gambling based on this paradigm certainly continues to dominate the agenda, notably in much of the gambling impact work coming from the US (e.g., the Division of Addictions at Harvard Medical School, as we will see later) and industry-funded research institutes elsewhere, including Australia.

Interpretationism (Phenomenology)

The substance for description and analysis, in the context of social research, is the everyday world that people live in and their associated states of consciousness through which they give meaning to what happens to and around them. In contrast to positivism, the interpretationists do not consider the (social and physical) world to constitute a separate realm and that meticulous and methodical research can uncover universal laws. The world, according to interpretationists, is humanly and socially constituted, consisting of inter-subjective meanings about facts and, thus, the researcher is very much a meaning-giving social being (in the midst of other meaning-giving social beings), and is situated in the process of life in general and research in particular (i.e., not the lofty positivist scientist, metaphorically floating above the world under study). Thus the researcher is necessarily involved in her own research, albeit with appropriate controls, perhaps by a procedure of *bracketing*, as the early founders of *phenomenology* (the philosophical-epistemological approach upon which interpretationism is based) would call it. The assumptions on which the research findings are based will become transparent and openly acknowledged and, thus, have more integrity than those of the more naïve positivists. Bracketing implies that the researcher—or the person who hopes to understand the research subject in his or her own life world—first tries to become aware of her own assumptions and understandings of the reality before her and then brackets them, thereby remaining as open as possible to the meaning given to the reality by the person-in-situation before her.

All of this does not mean, of course, that interpretationism is not dealing with empirical reality or even with reality. Within this framework (unlike positivism or empiricism, which denotes the possibility that facts speak for themselves), it is recognized that humans will always deal with reality in a human way and that is, by necessity, subjective and inter-subjective. Within the interpretationist way of thinking, this is the only way we have to make sense of, and give meaning to, the world and to understand the meaning given to their world by those we engage with as research participants.

Critical-Dialectical (Structuralist)

The social world (including social theory and its concepts and the individuals and researchers who devise them) is constituted through structures (or structuring processes) and social forces of which individual human agents are (mostly) unaware (especially in their every-day meanderings). According to some Marxists, for example, social phenomena emerge from underlying structures and processes based on the modes and relationships of (economic) production, the related politi-

cal and institutional processes and the associated ideological states of consciousness. Within such an assumptive framework, human development and *praxis* occur through active engagement with—if not resolution of—the contradictions associated with the modes of production, in an approach establishing a *dialectical relationship*.

As the ideology of a society is intricately associated with and reinforcing of the dominant order, and it numbers among its purveyors and agents the experts and knowledge professionals of the society (particularly within capitalist systems), the putative neutrality of theory and of its makers (i.e., scientists or researchers) is brought into question. One very recent contribution to this question—approaching it from the point of view of research validity is from Beach (2003). Whilst offering an epistemological position more aligned with the next paradigm (critical-participatory), he also helps us to understand the difference between critical-structural and critical-structuralist, the first signifying the recognition of the importance of structural arrangements, the second attributing deterministic quality to these arrangements, leaving human agents no choice but to implement what is wanted of them by the demands of the structure. According to Beach (2003):

... every social situation poses a number of material possibilities for action (each with its own viabilities and consequences for the acting subject) ... agents make positive recognitions of their social conditions, and ... then act on the basis of these recognitions.... [but] despite actively formed agent choices being made, social practices and material outcomes that favour the interests of capital still occur more readily than others under capitalist cultural circumstances ... and common ideological understandings of the worthiness of human aims and the structural possibilities for their realization affect human understanding and intervention. *On serious analysis, this is as much of a condition of research as it is of life at large.* (Beach, 2003, pp. 864–845; emphasis added)

Other critical, if not dialectical, structuralist approaches include those identifying patriarchy as the major determining structural arrangement causing social phenomena into existence, such as the subjection of women, or the ongoing discrimination against women worldwide, or, indeed, the fact that they “count for nothing,” as Waring (1998) suggested; or those identifying race or ability as the determining or main factor leading to both understanding and explanation of social phenomena.

In some important ways, mainstream (positivist) behaviourist psychological research, whilst focusing on the response to a stimulus, assumes the existence of potentially immutable social environments (society),

which are then understood (often without further analysis, as their analysis is considered to be the object of other social sciences) as providing the stimuli for said behavioural responses. The approach of the structural-functionalist school, which reigned supreme throughout the 1950s and 1960s, certainly would correspond to this understanding of structuralism, without, however, the critical-dialectical adjective added, and is, therefore, firmly situated in the positivist tradition of research. As such, a gambling problem is reduced to an individual pathological response to a socially-available stimulus, which, in itself, is only characterized by its there-ness as an objective economic fact, rather than in connection with powerful social interests. (In contrast, such a connection would be proposed by Marxists, with the structurally-determined desire of powerful groups to make profits from people’s weaknesses.)

Critical-Participatory (Action-Oriented)

Within this approach, knowledge, human agency and the constantly changing and to-be-changed-world under study are seen to be intrinsically connected. Acting and thinking form a conceptual unity and all human actions are necessarily meaning-giving and socially constitutive and constituted. The implications for research are fundamental and important. While the positivist paradigm maintains that theory is formed independently of the world under study (with the world submitted to rigorous and methodological examination), within the critical-participative (action-oriented) approach a constant interchange between knowing and acting is acknowledged. Thus theory is seen to be developed and is legitimated through action. Furthermore, the objects or subjects of research are—together with the researcher(s)—fully involved participants in the research, which thus becomes part of the ongoing dynamics and processes inherent in their social world. Therefore, the research orientation is constantly changing in a dynamic, mutually affecting, and dialectical relationship with that world.

This philosophical and ethical orientation towards conducting research shares with the critical-dialectical approach a central ethical focus—the social responsibility of the researcher is emphasized along with the premise that intellectuals or researchers cannot be neutral in their knowledge development and intellectual activities. The researcher necessarily has an impact on the research process and thus on the world in her practice—for the better or worse or whether acknowledged or unacknowledged. Returning to Beach (2003):

It requires researchers getting close enough to researched communities to become able to see and assess the world from the different perspectives within them. And it involves engaging in dialogue

about current community practices and aims with community members before conjointly extrapolating and evaluating new discourses to support courses of action that can take things in directions that may undermine the present class system. (Beach, 2003, p. 865)

For that matter, this could refer to directions undermining any system of which the structural arrangements and their reproduction systematically favour those (already) in power, for example men, whites, the abled, the rich, and so on.

This, again, conflicts with the assumed common understanding of gambling research as having to be scientific or having to be committed to the scientific method—to use the words of Shaffer (Benston, 2003). Shaffer (Benston, 2003) warned that those who take the position of advocates (relating to gambling, in this case) “risk substituting politics for theory-driven research” and that “researchers who become advocates risk developing studies in which the ends justify the means.” We will have to say more about Shaffer (Benston, 2003) and his philosophical-theoretical assertions and dictums in the following sections of this article.

In contrast, Lincoln (2003) recently replied to those who shared Shaffer’s (Benston, 2003) position that “understanding the complex problems we face in today’s society means that we must employ a range of research strategies, especially those that help us understand people in their social environments” and “if research on which government policies are based is flawed or too simplistic, this can produce extensive flow-on problems that can have long term effects on our communities” (Lincoln, 2003). And this, as we will argue, also applies to gambling research.

Postmodernism (Relativism)

Burr (1995) defines *postmodernism* as: “The rejection of ‘grand narratives’ in theory and the replacement of a search for truth with a celebration of the multiplicity of (equally valid) perspectives” (p. 185). Thus, the positivist idea of a central truth or central truths to be uncovered through rigorous research following an approved method is rejected for a more de-centred notion of reality and knowledge. This philosophical orientation is also opposed to structuralism and the idea that social phenomena can be explained by hidden structures (only), for example by the underlying economic structures, as theorized by Marx, or by psychic structures, as theorized by Freud. In fact, a hallmark of postmodernism is the rejection of *grand theories* or *meta-narratives*, used to make sense of the world we live in. As practice or action (whether by the individual, collective or the intellectual-professional) is seen to be discursive (often seen as a text) and relativ-

istic, the potential for a role of social agency is diluted and—often by implication—human potential for changing the fate of humankind and the context in which it can sustain itself is ignored, dismissed, or negated as part of the meta-narrative.

Thus, postmodern approaches are often seen as nihilistic, because they seem to identify people’s and researchers’ adherence to values and principles as mere forms of self-centeredness. Since principles are negated or subjected to a process of *deference*, the self loses its anchor entirely and becomes flotsam on someone else’s tide. The ethical responsibilities of the researcher—or indeed the intellectual—dissipate and in this sense, a strange de facto alliance between positivism and post-modernism has emerged, which, to a considerable degree, may explain the backlash against alternative methodologies and alternative epistemologies (e.g., Lincoln, 2003). In fact, two full issues of *Qualitative Inquiry* (vol. 10, issues 1 and 2) are dedicated to this very problem, to which the editors refer in their lead article as: “Dangerous Discourses: Methodological Conservatism and Governmental Regimes of Truth” (Lincoln & Cannella, 2004, pp. 5-14). All the articles in both issues discuss, sometimes vehemently, the language used in the US National Research Council Report and the No Child Left Behind Act of 2001 and the effects they have and will have on accepted research for governmental policy purposes.

It is quite impossible within the confines of this article, to satisfactorily elucidate and critique the positive and negative contributions of the epistemology of relativistic-Postmodernism (and its methodological implications) to the development of forms of understanding and analyzing those aspects of human reality that are of interest here. As we write, the story of postmodernism is being written against a background of momentous changes in all dimensions of human endeavour. Bringing to bear elements of previously mentioned critical epistemological positions, one would have to admit that the present structural changes being inflicted on the production of knowledge through its global marketization would invite the judgement that some expressions of postmodernism represent an impotent—if, for some, well-paid—diversion. On the other hand, many of its methodological tenets have undoubted value when attempting to better discern the hidden assumptions behind theoretical and ideological paradigms of knowledge acquisition, especially when incorporating them in post-structuralist, post-colonial and other hegemony-critical approaches.

Transpersonal-Ecological

Transpersonal-ecological approaches, with their emphasis on the dynamic interconnectedness inherent in all biological, social, and human realities, present a

kind of antithesis to the atomization and reductionism of traditional positivist (or empiricist) frameworks. An exponent of this approach, Capra (2003), places the analysis of living systems within four interconnected perspectives—form, matter, process and meaning—making it possible to apply a unified understanding of life to phenomena in the realm of matter, as well as to phenomena in the realm of meaning: “A central insight of this unified, systemic understanding of life is that its basic pattern of organization is the network. At all levels of life—from the metabolic networks inside cells to the food webs of eco-systems and the networks of communications in human societies—the components of living systems are interlinked in network fashion” (Capra, 2003, pp. 228-229).

Capra (2003) applies this theoretical approach to an analysis of contemporary challenges facing the human world and the environment of our planet, arguing that the imperatives of global capitalism and of sustainable community generation are on a collision course:

As this century unfolds, there are two developments that will have major impacts on the well-being and ways of life of humanity. Both have to do with networks, and both involve radically new technologies. One is the rise of global capitalism; the other is the creation of sustainable communities based on ecological literacy and the practice of ecodesign. Whereas global capitalism is concerned with electronic networks of financial and informational flows, ecodesign is concerned with ecological networks of energy and material flows. The goal of the global economy is to maximise the wealth and power of its elites; the goal of ecodesign to maximise the sustainability of the web of life...

These two scenarios—each involving complex networks and special advanced technologies—are currently on a collision course. We have seen that the current form of global capitalism is ecologically and socially unsustainable. The so-called “global market” is really a network of machines programmed according to the fundamental principle that money making should take precedence over human rights, democracy, environmental protection or any other value. (Capra, 2003)

However, human values can change; they are not natural laws ... The critical issue is not technology but politics. The great challenge of the twenty-first century will be to change the value system underlying the global economy, so as to make it compatible with the demands of human dignity and ecological sustainability. (Capra, 2003, pp. 228-229)

If Capra’s (2003) assertion seems like a plausible assessment of the nature of the predicament of human life and its “systemic and networked” relationships with the ecology, what would an epistemology, ade-

quate to understand human life, relational both in its links with ecology as well as internally relational, have to look like (after all, ontologically, we are not just monads or individuals, but social beings)?

Similar to conceptualizations of reality within post-modernism, this approach sees the nature of the self (and researcher) as *relational*: De-centred and socially-, historically-, and contextually-contingent. Characteristic of this philosophy, however, is the vision of the self, of the human person, as an embodied and sensuous being intricately connected with the social and physical world in a web of defining relationships. Fox’s (1990) description of the transpersonal ecological epistemological standpoint says it as well as any:

... given a deep enough understanding of the way things are, the response of being inclined to care for the unfolding of the world in all its aspects follows “naturally”—not as a *logical* consequence but as a *psychological* consequence; as an expression of the spontaneous unfolding (development, maturing) of the self...

The ecological self of a person is that with which the person identifies ... There are three bases of identification: personal, ontological and cosmological. (Fox, 1990)

Knowledge and action, then, are aligned with psychological evolution and development, increasingly concomitant with the experience of ourselves as carnal beings (i.e., conceiving of our own personal living reality as psycho-socio-biological beings, relationally situated and reciprocally enmeshed in the process of responsibly sustaining life in all its dimensions, personal, social and ecological, and, indeed, spiritual).

Our conception of the social needs adjustment as well. Without being able to go into detail, some of the contributions of a(n) (re-)emerging social epistemology would be worth pursuing, notably the work of a French group called “anti-utilitarian movement in the social sciences,” which abbreviates to MAUSS (Mouvement Anti-Utilitariste dans les Sciences Sociales), which is also the name of the great early-twentieth century social scientist Marcel Mauss. His book, *The Gift* (1925), is “perhaps the most magnificent refutation of the assumptions behind economic theory ever written” (Graeber, 2000). After ethnological investigations, he concluded that:

[I]n gift economies, ... exchanges do not have the impersonal qualities of the capitalist marketplace. In fact, even when objects of great value change hands, what really matters is the relations between the people; exchange is about creating friendships, or working out rivalries, or obligations, and only incidentally about moving around valuable goods. (Graeber, 2000)

Such thinking moves back to reflecting on the nature of human beings and restores the fact of their ontologically social character to the centre of epistemological attention. Such epistemology moves away from the conception of subjects as essentially greedy and selfish monads, entering purely rational contractual relationships with one another, towards one which restores the existential duality of our personal-social and ecological ontology.

Thus, the link with gambling and the systemic and personal dimensions of its predicaments should be rather easy to make.

Part Two: Gambling Research

Let us now move to a more detailed examination of the premises and methodological approach of positivism, in particular, and the associated natural science discourse, both providing the foundation for an in-depth critique of this approach as applied to the gambling phenomenon and especially in the context of industry funding, support and direction.

Research on pathological or problem gambling and the social impact of gambling, at least in the English-speaking world, has been largely dominated by the positivist research orientation—in the form of psychological or experimental research (most commonly using medical conceptions of problem gambling even while this is not explicitly acknowledged), but also in surveys and problem gambling screening instruments. While positivism would seem to be an intellectually archaic and regressive paradigm, its longevity and general contemporary respectability is marked—both within gambling research and in general—and we have argued elsewhere that this can be largely attributed to political interests aligned with legitimization and preservation of the status quo (Borrell & Boulet, 2001, 2002). This is promoted by a seemingly deliberate attitude of innocence, whereby key international scholarship of the last few decades is simply ignored and thus marginalized (e.g., Shaffer & LaPlante, 2003). Before launching into a critique of positivist gambling research, however, which will form the remainder of this discussion, some notable exceptions should be mentioned (and readers may well have many more examples to add to this brief itemization).

There has been considerable research conducted on the economic impact of the introduction and expansion of new forms of gambling in recent years, which, broadly speaking, would fit into the epistemology of critical-dialectical (structuralist; see our discussion in part one of this paper). In Australia, this has largely focused on the negative economic impact of poker machines (especially on disadvantaged communities) and the associated regressivity of the taxation regime (e.g., Doughney, 2004; Doughney & Kelleher, 1999;

Livingstone, 2001). In Australia and, the US, many studies have also been conducted on the economic impact of casinos. Of course, this is not to suggest that researchers examining underlying economic structures of gambling policy, regulation and activity are purely structuralist within their research orientation. For example, Livingstone (2003) has conducted in-depth research and analysis on the everyday social, psychological, philosophical and existential meaning of gambling, especially for problem gamblers. They certainly do recognize, however, and to a degree privilege, the importance of the *structural arrangements* that are conducive to the community and personal impacts they examine and detect when engaging in their conversations with people. (The same can be said for any research or researchers; i.e., they do not necessarily remain in the allotted epistemology according to our categorizations, but they will tend to have their epistemological focus within one or, at least, within philosophically compatible categories).

There are some, though not many, examples of *interpretationist* or *critical-participative* (action-oriented) gambling research studies in Victoria (Australia):

- *The Forgotten People*, written by the (female) spouse of a problem gambler for the Gambling Research Newsletter of the Victorian Local Governance Association. She describes her devastating experience while married to a problem gambler and thereafter, whereby she eventually lost her marriage, her family home, her neighbourhood connections and her faith network (Anonymous, 2001).
- A program (*Free Yourself*), which provides a social network and support space called “The Chapel” for former problem gamblers and others, created by someone who was a problem gambler herself and which is based on her own research connected to what worked for her (see <http://www.freeyourself.com.au/upcomingevents.html>).
- A presentation at the National Association of Gambling Studies (2002) by a group of ex-problem gamblers (from a group based at Gambler’s Help Northern, Melbourne), describing their experiences and also what seemed to work or not work in their recovery. This was very powerful, not just for the immediate relevance of the information imparted for policy and prevention, but also as a reminder that problem gamblers, invariably subjugated as subjects or as ill or deviant people within experimental research, may be well-presented, intelligent, competent and articulate.
- Following action-research principles, some community consultation projects have attempted to maximise community involvement in the direction that the research takes (i.e., in sampling composition and input into analysis of

findings and policy recommendations; e.g., [Brown et al., 2002](#)).

- Further phenomenological work includes *Playing for Time: Exploring the Impacts of Gambling on Women*, with its emphasis on the meaning of gambling for the female problem gamblers ([Surgey & Seibert, 2000](#); as cited in [Borrell, 2003](#)).

Postmodern and transpersonal ecology approaches in gambling research—whilst sometimes recognizable in traces, especially postmodern approaches—are virtually absent from the available literature. Some of this absence can be explained by the relatively emergent nature of the latter approach and the difficulty of identifying the practical and methodological links with the epistemological standpoint of the former. They certainly would have a place in gambling research, for example, the postmodern emphasis on the post-structural and on agency and the transpersonal ecological emphasis on the systemic and relational nature of all human action and knowledge.

Features of Positivist Approaches to Research

We will now turn to a more systematic critique of the positivist approach to contemporary gambling research, which is dominant in the English speaking world, the above having served as a broad overview of epistemologies and associated conceptualizations of the social world.

To guide the first part of this exploration we draw from a piece by [Shaffer and LaPlante \(2003](#); see [note 1](#)). While Shaffer claims to be a constructionist, his views in this article would seem to present a nice example of the positivist orientation to (gambling) research epistemology and methodology (with an explicit alignment with the traditional natural scientific method). Thus it is useful to refer to it here for discussion purposes.

Assumptions and Premises

1. *The process and implementation of research can be quarantined from the world under study to ensure objectivity and value-neutrality.* In fact, [Shaffer and LaPlante \(2003\)](#) have argued a case for *technical objectivity*, as opposed to epistemological objectivity, whereby values may intercede before and after the research process but not while it is being undertaken.

Technical objectivity (i.e., the use of the scientific method), as opposed to epistemological objectivity (i.e., realism), requires that scientists distinguish their opinions and subjective states from the evidence garnered by

systematic research before reaching a conclusion... ([Shaffer & LaPlante, 2003](#))

Researchers are individuals and as such may have strongly held values, but they are required to seek objectivity ... the extent to which researchers stay within their findings and strive for objectivity in their presentation is a crucial measure of ethicality... Nowhere is this truer than when research examines controversial topics... The conflation of advocacy and science is a clear breach of ethical principles... Science has a great responsibility that requires the vigorous defence of scientific freedom. It also requires objectivity, protection against misuse and openness to valid criticism. ([Ondersma, 2002](#); as cited in [Shaffer & LaPlante, 2003](#))

...matters of public policy are extra-scientific rather than anti-scientific. This is the conception of science as a neutral instrument, which can be used equally for good or for ill. Science provides only means for ends, which are to be determined outside the scientific enterprise. ([Kaplan, 1964](#); as cited in [Shaffer & LaPlante, 2003](#))

2. *When a threshold of research findings, based on rigorous scientific method, is reached the “truth” will emerge* (suggesting a type of epiphenomenon, independent of contamination by human agency). This emergence will be objective and value-neutral, independent of the social context in which this emergence occurs and of the biases of individual researchers. Within this model, the research findings of individual studies may be likened to bricks, which are accumulated toward the building of a great wall. When enough of the right bricks are brought together, the wall of truth will be complete; we will have arrived at the truth.

Post-science advocacy must wait until sufficient evidence has been amassed for science to have an amply developed opinion. Until the evidence is mature, the potential for conflicts of interest is high. The most difficult part of post-science advocacy is deciding when we know enough to warrant taking off our science hat and putting on our citizen hat.

...we hold that scientific objectivity is a technical objectivity reflected in the scientific method and that truth evolves over time.

¹ This op-ed by Shaffer and LaPlante was written in defence of industry-funded gambling research (such as their own work through the National Centre for Responsible Gaming; see <http://www.ncrg.org>) and research objectivity within this context. It was prompted by letters to the editor written by the authors in response to an invitation for comment on the subject.

Objective science progresses slowly using a set of rules: these principles guide the generation of knowledge. (Shaffer & LaPlante, 2003)

3. Related to the second point, *the judgement and gathering of the best available evidence is a neutral and value free process, following a rigorous research method*. It occurs (or can occur) apart from the culture, society and intellectual institutions and professions that form its context.

...scientists must continually challenge themselves and their positions with the best available evidence. Many of the best scientists work tirelessly to find exceptions to their rules. To reiterate ... we simply advocate that scientists play by the rules of science. This is what we meant by scientific objectivity. Scientific objectivity via the scientific method is intended to help scientists manage their personal values. (Shaffer & LaPlante, 2003)

4. *Ascertaining linear or simple configurations of causality will lead to the apprehension of truth about the human or social world*. In relation to the third point (above), specific lines of causality may be seen as one of the facts or bricks to be accumulated toward the great wall of truth.

Scientists understand that playing by the rules of science yields technical objectivity. Scientific thinking requires a careful and dispassionate consideration of *causal and consequential chains of influence*; conventional wisdom often conceals our ability to see these links clearly. (Shaffer & LaPlante, 2003; emphasis added)

5. *Characteristic of positivist approaches is a general denial that knowledge itself is an act of social construction*. In view of the great body of scholarship on this subject (e.g., Berger & Luckmann, 1966), produced over the last decades (much of it intellectually challenging, but not necessarily revolutionary), scientists and social researchers cannot really ignore this idea—even if they do not agree with it. The idea at least needs to be recognized or addressed in any pertinent discussion and anything less would, indeed, seem to fit the concept of denial. Certainly, Shaffer and LaPlante (2003) give evidence of such denial in their discussion of research epistemology.
6. *Positivist epistemology and methodology is essentially conservative*. Value neutrality or objectivity tends to be invoked in support of the status quo or dominant power regimes, while alternative views or community advocacy tend to be seen as biased. This is consistent with the tendency of

research institutions to be aligned with and legitimizing dominant power regimes and associated economic organizations and institutional networks. Shaffer and LaPlante (2003) make the following comments in their critique of research that is used for community advocacy:

Our concern is with the one-sided advocacy that always knows best, has all the answers, argues only from limited evidence and attempts to influence the scientific process: in other words, the active support of a predefined and explicit agenda. Such misplaced advocacy is not difficult to come by: all alcohol is bad; all gambling is dangerous; industries cause bad things to happen; people are weak in the face of temptation etc. This kind of advocacy can corrupt science just as easily as counter transference can corrupt psychotherapy. Advocacy engenders the value that the ends always justifies the means—that an impure scientific process is irrelevant so long as the findings support the stated agenda.

What is notable in this critique in its full context is the absence of any comment on industry advocacy or possible bias arising within research paid for or commissioned by the gambling or any other industry (e.g., drug research funded by pharmaceutical companies; the effects of smoking funded by the tobacco industry).

7. Following all of the above, scientific technology will ensure that research is objective and value-free even in the case where it is totally or mostly dependent on industry—or, for that matter, government funding and when that industry has an interest in the research in view of its profit maximization imperatives (the latter point openly stated by corporations in their annual reports to shareholders). Shaffer and LaPlante (2003) state that “funding sources are irrelevant to these (method choosing) processes.” Indeed, this forms a central point in Shaffer and LaPlante’s (2003) defence of the scientific method as assuring objectivity and value neutrality—the very focus of their discussion perhaps revealing some interest and bias.
8. *The notion of reductionism brings together many aspects of a positivist epistemology as referred to above, including the atomization and objectification of the world to be studied and linear causal explanations of phenomena and the human world*. Fuchs (2003) describes the reductionism of traditional science with some eloquence:

Reductionism can be defined as epistemology that explains new properties of a system and the whole

in terms of old properties and the system's parts. A system is seen as the agglomeration of its parts, a differentiation of a system, its structure and its behaviour in time and space is explained by reference to processes immanent to single parts of the system. Mechanical determinism can be defined as a mechanistic and rigid epistemological approach that argues that an event or a sum of events necessarily results in a certain way and a certain output...

Mechanical determinism implies that causes and effects can be mapped linearly: each cause has one and only one effect, similar causes have similar effects, different causes produce different effects. (Fuchs, 2003, p. 388)

9. In its mimicry of the natural sciences, positivist branches of psychology (dominant in the English-speaking world, and especially the US) *conceptualize human beings as isolated atoms for study, apart from the world in which they act in ways that are personally or socially meaningful and socially reproductive*. Implicit in this is the assumption that the social, human world stands still in a frozen and static state for study and does not substantially change thereafter (thus forming a *temporal* dimension in addition to the *spatial* and *systemic* dimensions implicit in such atomization and fragmentation). The conceptual emphasis is on the interaction between entities—and not too many of such entities, due to the restrictions of the number of variables that can be statistically analysed in relation to each other.
10. Another hallmark of this approach is the blind faith that *categorizations of the social world and of people are neutral with respect to values, cultures, and concepts, and not subject to social conditioning or contextualization*, and are therefore suitable for research as supposedly objective entities to be studied in relation to each other (usually using statistical analysis). This obviously has special implications for both experimental or psychological research and population surveys.
11. Following the natural science model, *the aim in studying human behaviour and the human condition is to arrive at findings that are replicable and predictable*. With replicability of research studies and associated research findings comes ascertainment of facts which can then be accumulated toward the great wall of truth (see the second point, above).
12. In line with the eleventh point, *there are a-social, a-historical, unchangeable laws to be uncovered*. This belief is very much in force in positivistic

psychological and social research. Importantly, these laws are seen to be independent of the interests of dominant power holders and structural arrangements.

13. In reiteration of many of the above points, individually and in conjunction, *traditional positivistic approaches entail a minimization of the role of the researcher as a social agent*, as knowledge accumulation (not production) is deemed to be a socially and culturally neutral act following the strict rules and methods of science.

Part Three: A Constructionist Critique of Positivist Epistemology and Methodology

In using a social constructionist lens to critique positivism (especially as it commonly forms the basis for psychological or experimental research on problem gambling, pathological gambling screens and gambling impact and activity surveys), we broadly refer to a typology of underlying assumptions developed by Burr (1995), any one of which could be said to characterize a social constructionist approach:

1. Critical stance towards taken-for-granted knowledge;
2. Recognition that the ways in which we commonly understand the world, the categories and concepts we use, are historically and culturally specific;
3. Belief that knowledge is sustained by social processes, i.e., our versions of knowledge are developed through the daily interactions of people in the course of social life; and
4. Focus on the types of action that emerge from our socially negotiated understandings or social constructions (e.g., whether problem gambling is seen as a personal weakness in a world of free choice, as a medical illness, as the result of manipulative advertising and—indeed, of neuro-physiologically induced reactions to deliberate sensory stimuli or as one of the outcomes of a desperate psycho-social situation).

In the following discussion we expand on and critique some of the assumptions and premises of positivist-empiricist research approaches, as raised in the previous section, using Burr's (1995) typology of social constructionism and, hopefully, laying the basis for an alternative foundation of and for gambling (impact) research.

1. Critical Stance Towards Taken-For-Granted Knowledge: Why Method or Technical Objectivity Cannot Ensure Neutrality

The positivist paradigm, as mentioned previously, assumes that the process of research can (and should) be quarantined from the world under study to ensure objectivity and value-conceptual neutrality.

This compartmentalization presents, however, a rather miserably inadequate sophistry, that does little to address the scholarly dialogue on this issue over the last few decades. As Bourdieu (1992, 1996) and many other theorists and researchers have noted, the researcher or scientist is very much a part of the world under study and subject to much of the same influences and constructions as the people who form the designated subjects of any research project. Thus, research projects tend to take as a given the values, questions and categories of the society in which the project is situated—this is the world taken for granted, the neutral backdrop that eludes the habitual gaze. This observation as applied to sociology is of relevance here:

The sociologist is ... saddled with the task of knowing an object—the social world—of which he [sic] is the product, in a way such that the problems that he raises about it and the concepts he uses have every chance of being the product of the object itself. (Bourdieu, 1992, p. 235)

Furthermore, in relation to the construction or nomination of social indicators by researchers, Bourdieu comments on the “intuitionism” that researchers inevitably utilise in the context of a positivistic faith in the nominal identity of the indicators (Bourdieu, 1996, p. 20). He also speaks eloquently of the habit of researchers who universalise their own experience in the nomination of abstract, formal typologies that form the basis of their ostensibly neutral and objective social research (Bourdieu, 1996, p. 211).

Positivism also assumes that when a threshold of research findings (based on rigorous scientific method) is reached, the truth will emerge. Both process and product of this emergence will be objective and value-neutral. Positivism conceives truth as an emergent property that makes itself known when a certain threshold (often expressed via statistical probabilities and controlled by a self-referential group of scientific gate-keepers) in the collection of facts has been reached. Socially contextualized concepts, values and analytical conventions of researchers are thought not to contaminate or impinge on the autonomy and purity of the process and the resulting truth (evidently a rather essentialist formulation of events). Following this line of thinking, judgement and the gathering of the best available evidence is a neutral and value free process, following rigorous research method. It occurs apart from the culture, social context and intellectual institutions and professions in which it occurs.

Shaffer and LaPlante (2003), who claim relativism-constructivism as their epistemological home, still ascribe to the possibility of emerging objective truth about the causalities of problem or pathological gambling, which then can—with great certitude—inform public and social policy (as well as the marketing

strategies of the profit-oriented-but-ethically-self-restraining gambling industry), but they fail to acknowledge (as social constructionism does; see Burr above) the linkages between methodology, epistemology, ontology and the complexity of political-economic reality as well as the reality of social research as a true intervention into social reality.

In discussing the claim that certain methodologies and technologies guarantee scientific neutrality, it may be useful to invoke Bourdieu yet again; he has argued that fetishizing research methods and instruments can lead to the failure to critique the methods themselves, that too much attention to instruments is “liable to make researchers forget that, in order to observe certain facts, they should not so much refine the observing and measuring instruments as question the routine use that is made of the instruments” (Bourdieu, Chamboredon, & Passeron, 1991, p. 62).

Ascertaining linear or simple forms of causality according to positivist approaches will lead to the apprehension of truth about the human or social world. As previously noted, many theorists have convincingly argued that simple linear models of causality are woefully inadequate to the task of analysing and understanding the human social world—which is vastly more complex and dynamic than such models would allow (Bourdieu, 1996, p. 107; Fuchs, 2003; Kickbusch, 1989) and we have argued as much elsewhere (Borrell & Boulet, 2001). The practice of reducing the human world to a related set of socially-constructed variables and thence determining a causal relationship between them, no doubt owes much to the constriction of what can be calculated via statistical analysis (i.e., too many variables diminish the power of the test). In effect, we have a situation where the epistemology and conceptual understanding follow the capacity of the method rather than the other way around. It is the metaphorical (methodical) tail wagging the (epistemological and theoretical) dog. Or, still more pertinently, if the only thing I know is handling a hammer, all reality becomes (a) nail(s) or else simply does not exist (scientifically).

2. Recognition That the Ways in Which We Commonly Understand the World, the Categories and Concepts We Use, Are Historically and Culturally Specific

Most of the above aspects of a positivist epistemology converge on the notion of reductionism, part of which is the idea that data or information about human knowledge, views and perceptions can be derived without regard to the social interactional context. In addition, positivistic approaches seem to have blind faith that scientific categorizations of the social world and of people are value-neutral and not subject to cultural conditioning or contextualization and are therefore,

suitable for research as objective entities to be studied in relation to each other. As recounted by Fuchs (2003), Bourdieu has been most articulate in criticizing this assumption:

For Bourdieu, the individual is not an isolated atom and can only exist in relationship to others. (He stresses that the individual is practically and in his/her struggles connected to others and that his connectedness is the decisive aspect of social processes...)

By practical social interactions in groups, new qualities and structures emerge that cannot be reduced to the individual level. This is a process of bottom-up emergence that is called agency. Emergence in this context means the appearance of at least one new systemic quality that cannot be reduced to the elements of the system. So this quality is irreducible and it is also to a certain extent unpredictable i.e., time, form and result of the process of emergence cannot be fully forecast by taking a look at the elements and their interactions. (Fuchs, 2003, pp. 397-398)

This issue is eminently relevant to gambling research, especially activity and impact studies that are based on a survey methodology and problem gambling screening instruments. One of us has discussed this in the context of local, government commissioned surveys elsewhere (though this is not to argue against the usefulness and meaningfulness of survey methodologies in general; Borrell, 2000). A fundamental problem with many survey instruments is that inadequate analysis is conducted before arriving at the items or categories for study, thus the intuition and common sense notions of the researchers; based on their unacknowledged understandings of the world they live in, inevitably impinge on the research methodology. “Loss of control” as part of the symptomatology of individual gambling pathology and an item in many surveys and screening instruments, for example, is a case in point that has also been discussed elsewhere (Borrell, 2003).

Bourdieu (1996) argues that the absence of preliminary analysis of the social significance of indicators can make the most rigorous-seeming surveys quite unsuitable for a sociological reading. In relation to surveys on consumption he comments:

... because they forget that the apparent constancy of the products conceals the diversity of the social uses they are put to, many surveys on consumption impose on them taxonomies which have sprung straight from the statistician’s social unconscious, associating things that ought to be separated ... and separating things that could be associated. (Bourdieu, 1996, p. 21)

The following comments by Bourdieu (1996) include the criticism of fallacious reasoning relating to causality, a criticism that is closely related to critiques of the socially constructed nature of categories (e.g., demographic characteristics, types of actions, motivations, behaviours, attitudes, or morbidities) to be studied in relation to each other.

But the substantialist mode of thinking is perhaps most unrestrained when it comes to the search for the “explanatory factors.” Slipping from the substantive to the substance ... from the constancy of the substantive to the constancy of the substance, it treats the properties attached to agents—occupation, age, sex, qualification—as forces independent of the relationship within which they “act.” This eliminates the question of what is determinant in the determinant variable and what is determined in the determined variable, in other words, the question of what among the properties chosen, consciously or unconsciously, through the indicators under consideration, constitutes the pertinent property that is really capable of determining the relationship within which it is determined. Purely statistical calculation of the variations in the intensity of the relationship between a particular indicator and any given practice does not remove the need for the specifically sociological calculation of the effects which are expressed in the statistical relationship and which statistical analysis, when oriented towards the search for its own intelligibility, can help to discover. (Bourdieu, 1996, p. 22)

Thus, the problem of researcher intuition—in forming categories or typologies as the subject for study, compounds the problem of positivist assumptions relating to linear causality and simple relationships within groups of variables. Bourdieu (1996) also argues that such simple categorization and modelling of cause and effect—as pre-empted in the research methodology, precludes the possibilities of obtaining more complex information about the relationships included in what is seen as an independent variable:

The particular relations between a dependent variable (such as political opinion) and so-called independent variables such as sex, age and religion, or even educational level, income and education, tend to mask the complete system of relationships which constitutes the true principle of the specific strength and form of the effects registered in any particular correlation. The most independent of “independent” variables conceals a whole network of statistical relations which are present, implicitly, in its relationship with any given opinion or practice. (Bourdieu, 1996, p. 103)

Of course, this criticism can, and has been, directed toward the practice of using simple demographic information to encapsulate the supposedly important so-

cial dimensions of subjects of experimental or psychological research, who are otherwise assumed to be homogenous and inter-changeable (Bayer & Shotter, 1998).

Two main tenets of positivistic social research (and that aspiring to imitate the natural science model) are replicability and, from there, the intention to predict future events or behaviours. Critical of this type of position, Fuchs (2003) argues that such an aim and requirement is inappropriate in the study of the human, social world, due to the nature of what is being studied. His critique is explicitly directed at simplistic, reductionist and atomistic approaches to social research, which is consistent with the tenet that the whole is greater than the sum of its parts:

Due to this complexity, the results of social change cannot be fully predicted. Social change cannot be accounted for by adding up all the strategies and movements undertaken by groups and individuals at a certain moment of time. There are emergent qualities in society that cannot be reduced to individuals or groups because they result from the complex interplay and interactions between social groups and human beings. (Bourdieu, 1990; as cited in Fuchs, 2003, p. 405)

Fuchs (2003) again cites Bourdieu (1990) in this context as stating that “the social world is a space of objective relations that transcend the agents and is irreducible to interactions between individuals” (p. 405).

3. *Knowledge As Sustained Through Social Processes: The Social Construction of Knowledge, and Researchers As Active Social Agents*

As previously noted, positivism minimizes the role of the researcher as a social agent, as knowledge accumulation (or production) is deemed to be a socially and culturally neutral act. This neutrality is putatively assisted by scientific technology, which ensures that research remains objective and value-free (irrespective of the social uses intended by those who fund it, for example).

In refutation of the above, we would argue that knowledge and knowledge production are not only intricately interwoven with the social, economic and political world where they are generated and sustained—they also play a fundamental role in the ongoing reproduction of this world. Thus the researcher is

very much a social agent, deeply enmeshed in the reproduction of the social world (and academic and institutional knowledge-generating sub-cultures).

As social classificatory schemes or systems are the product of the internalization of the structure of social space (Bourdieu, 1996, p. 175), it follows that researchers will be subject to such internalization and will even promote these seemingly self-evident and generally unquestioned schemes in the research implementation process. Even classificatory schemes generate practices and these practices inevitably include research conceptualization, theorization and activity and the dissemination of research products by a variety of means and mediums. Thus, via the *habitus* (see note 2) of research scholarship (or natural science epistemology and methodology as applied to psychological and social research), the world, with its meaning- or sense-giving schemes is reproduced.

Clearly research is never really disinterested, not even technically, and one would not expect, in modern times, that any informed scholars would be presenting such a case in the context of discussions about human and social research epistemology. It is, however, again necessary to articulate the point that knowledge is not generated or uncovered apart from the world, but is itself an act of social construction carried out by social agents—“intervening in the conditions of existence”:

... the emphasis is on agency... Bourdieu stresses that the principle of this agency is a result of collective history that is acquired in the course of individual history. Here, the emphasis is on structural aspects of the social world. Agents are seen, on one hand, as subjects of acts of construction of the social world; on the other, it is also maintained that the basis of the principles of construction can be found in the social world. Structures and actors are considered as opposing moments that are not strict pure beings, but related by practices and hence are also being-for-another. (Bourdieu, 1986; as cited in Fuchs, 2003, p. 396)

However, despite these and many similar scholarly arguments that have been put forward over the last few decades, positivist researchers, such as Shaffer and LaPlante (2003) and seemingly many others in the gambling research area, remain calmly confident that they can remain neutral with respect to cultures and values, and untainted during the research process, even while refusing to acknowledge its possibility.

4. *Types of Action As Emerging From Our Various Social Constructions: Researcher Bias and Industry Funding*

Value neutrality or objectivity tends to be invoked in support of the status quo or of existing and dominant power regimes, while alternative views or community

² Bourdieu’s (1996) concept of *habitus* refers to the ensemble of dispositions by which actions and attitudes in everyday life become habit. It regulates the range and type of actions that are possible.

advocacy tend to be seen as biased, which is consistent with the tendency of research institutions being aligned with and contributing to the legitimacy of the former. A quote from Namenwirth (1986; as cited in Lather, 1992) would seem appropriate to open a more in-depth discussion on this issue:

Scientists firmly believe that as long as they are not conscious of any bias or political agenda, they are neutral and objective, when in fact they are only unconscious (Lather, 1992, p. 91).

Thus, such a lack of consciousness alongside an absence of the most basic critical self-reflection and transparency can be used to shore up the prestige of disciplines, practitioners and experts as well as aligned institutional and economic interests. As argued above, research methodologies, technologies and the very conceptualization of what is to be studied cannot be separated from intellectual and value bias. This is despite the seemingly entrenched habit of many behavioural scientists and social researchers in compartmentalizing the world to make it more amenable to study and then treating those compartments as if they were real, even while calling this process and the epistemological basis upon which it happens, relativist-constructivist as referred to above.

Elaborating on this topic, Burr (1995) writes about the historical development of psychology as a discipline:

Social psychology as a discipline can be said to have emerged from the attempts by psychologists to provide the US and British governments during the Second World War with knowledge that could be used for propaganda and the manipulation of people. It grew out of questions like, “How can we keep up the morale of troops?” and “How can we encourage people to eat unpopular foods?” It also grew up at a time when its parent discipline of psychology was carving out a name for itself by adopting the positivist methods of the natural sciences. Social psychology as a discipline therefore emerged as an empiricist, laboratory-based science which had habitually served, and was paid for by, those in positions of power, both in government and in industry.

Social psychologists in the 1960s and early 1970s were becoming increasingly worried by the way that the discipline implicitly promoted the values of dominant groups. The “voice” of ordinary people was seen as absent from its research practices, which, in their concentration on de-contextualized laboratory behaviour, ignored the real-world contexts which give human action its meaning. A number of books were published, each in its own way trying to redress the balance, by proposing alternatives to positivist science and focussing upon the accounts of ordinary people (e.g., Harré & Se-

cord, 1972) and by challenging the oppressive and ideological uses of psychology (e.g., Armistead, 1974; Brown, 1973). These concerns are clearly apparent today in the work of social psychologists in social constructionism. (Burr, 1995)

The world of the academic institution and, most importantly, the discipline within which the research project occurs, embed the latter with associated world-views, concepts, values and (partly) agreed-upon or reflexive behaviours, vocabularies, language and ideas. Research projects cannot be quarantined from this world-taken-for-granted, as Shaffer and La Plante (2003) seem to suggest, in spite of (or even because of) their professed relativist-constructivist epistemological standpoint. This is why studies within certain disciplines only yield the type of information and concepts that they are set up to yield in the first place. Even the nature of the human subject for investigation cannot be taken for granted, as explored nicely in a book edited by Bayer and Shotter (1998), *Reconstructing the Psychological Subject: Bodies, Practices and Technologies*.

Continuing our epistemological-methodological argument with Shaffer and LaPlante (2003), their rather partial, tendentious and negative rendition of the concept of advocacy (namely, as only applying to those who oppose current gambling regulatory structures or are critical of new forms spreading into all nooks and corners of our communities) makes one wonder why they do not link it to—or even reflect on the possibility of—the advocacy exercised by the gambling industry and the corporations who make rather impressive profits from its operations? To reiterate a point touched on previously, this bias may be rather telling, especially given the multitude of poorly executed studies funded by gambling industry dollars, (often implemented under the aegis of governments) and very often recommending or indicating minimum or voluntary, regulation of the industry. Moreover, they usually place the onus of proof or evidence of (potential) harm on those wishing to protect the community from such harm rather than on the gambling corporations wishing to introduce or spread (potentially) harmful products.

Within this context, industry advocacy (or lobbying) tends to invoke positive connotations of that word (e.g., Benston, 2003), or it is apparently assured by the notion of a neutral methodological procedure, as long as it remains possible to hide behind the cool postures and rhetorical conventions of scientism. This process is enabled by the absence of any reflection on the link between methodology-epistemology-ontology and their real-life links with political and economic power holders. Of course, when neutral research products (like studies focusing on individual pathology at the expense of contextual aetiological factors, or survey findings denying links between proximity of gambling opportunity and proportions of problem gamblers) become part

of public relations, marketing, advertising, lobbying and other legitimacy-producing evidence in the media, courts and other public arenas, the unbiased researchers and scientists can return to claiming the split between pure research and the practical and political applications to protect their innocence for the ensuing human disasters.

And there we were, believing that such arguments had outlived their use-by date after the syphilis experiments, some fifty years ago (Jones, 1993), after Hiroshima, some sixty years ago (Oppenheimer's words still reverberate: "In some sort of crude sense, which no vulgarity, no humour, no overstatement can quite extinguish, the physicists have known sin, and this is a knowledge which they cannot lose"; Howard, 2003) and after the Camelot Project in Chile and elsewhere in Latin America, some 40 years ago (Horowitz, 1967). There is meanwhile a plethora of publications available about the uses and misuses of research—from tobacco, to alcohol, to pharmaceuticals, to cleaning products, to medical research, the GME food, etc., or the recent statement by the Union of Concerned Scientists (2003, "Scientific Integrity in Policymaking: An Investigation into the Bush Administration's Misuse of Science") certainly actualizes these concerns right up to the present day. Playing the card of scientific neutrality and objectivity in such an environment seems to us rather retrograde and we have dealt with this issue in a previous paper (Borrell & Boulet, 2002), in which we also referred to the rather insalubrious links between industry and governments.

Thus we would reiterate that research models and approaches that reproduce rather than test their knowledge systems will tend to maintain the status quo and current power relations and imbalances. Gambling research is directly associated with the profit and power interests of multi-billion dollar industries and with the interests of governments national and state—attempting to solve their fiscal problems (especially their shrinking and increasingly regressive tax bases) through means that are, or seem to be, politically most palatable and that is through indirect consumption taxation regimes. Within this context, researchers and research institutions can choose to be consciously and fastidiously responsible and independent or be an intricate part of the institutional means that reproduce social and economic power imbalances; that is they can either work on the better recognition and solution of problems or they can become part of them.

Shaffer and LaPlante's (2003) conclusion in their article leaves us without much comfort as to the directions their research is taking and as to its social consequences:

Ultimately, a blend of scientific method and personal integrity guide [sic] the generation of knowledge. "There is no guarantee that the true and the good go always hand in hand, but it is man's [sic] estate to reach out to both." (Kaplan, 1964, p. 410; as cited in Shaffer & LaPlante, 2003)

We wonder where and with whom the two researchers want us, their readers, to leave the benefit of the doubt about either truth or good? Most likely, it seems to us, with those who pay for their study and we base that assessment on our critical realist account of how the world seems to run.

Conclusion: The Way Forward. Some Comments and Suggestions

In conclusion, we would like to reiterate Lincoln's (2003) view that "understanding the complex problems we face in today's society means that we must employ a range of research strategies, especially those that help us understand people in their social environments" (emphasis added). Such an approach requires a continual, critical self-reflectivity in relation to the research process, its epistemological underpinnings and our own relation to the focus of inquiry and the social world that we are very much part of. This has a special and obvious-to-all pertinence when one is in receipt of research funds from profit-motivated industries. Such an approach also invariably requires humility, as we remain open to the uncertainties and quandaries that exploration of ontological and epistemological issues can yield. The danger in clinging to the lifeboat of uninformed certainty, perhaps disguised as a special brand of professional expertise, is of great harm to public welfare. To leave the final word to Lincoln (2003): "if research on which government policies are based is flawed or too simplistic, this can produce extensive, flow-on problems that can have long term effects on our communities."

On the other hand, the positive emancipatory potential of a variety of research approaches has been written about extensively, and we have touched on some of this subject matter in our "Cook's Tour" in part one of this paper. While we do believe that it is the responsibility of the researcher to place his or her skills, knowledge, expertise and resources in the service of community well-being and a sustainable future, we also acknowledge that how one goes about this is not always (or even usually) a straightforward or simple matter. Thus, we conclude that researchers are especially obliged to be familiar with (if not part of) current scholarly debates about the nature of the world and the foci of their study and methodologies that are duly congruent with the nature of what is being studied.

For the professional intellectual, especially when the public good is at stake, ignorance is no excuse.

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