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CONFRONTING INTERNAL AND EXTERNAL PROBLEMS OF CROSS- INTER- AND MULTI-DISCIPLINARITY

RESEARCHING CYBER CONFLICT AND GLOBAL POLITICS

Athina Karatzogianni

Interdisciplinary research is one type of research that is nowadays frequently recognised as one to be encouraged, and indeed is one of the types of research that research-funding institutions indicate as preferred areas of research. At the same time, practitioners of such research find many obstacles to their career development and advancement, frequently stepping into fields that are hermetically closed to the idea of multi-disciplinarity, interdisciplinarity or cross-disciplinarity. In an era when the disciplinary boundaries are no longer clear cut, and where interconnectivities and feedback loops in many fields inevitably exist both theoretically and methodologically, it is worth asking why the academic establishment insists on keeping certain disciplines exclusive, while others embrace more of a 'renaissance' thinking on modern epistemology. In, other words, it is urgent to discuss the politics of interdisciplinarity. This paper defines types of research and then discusses two groups of issues: (a) philosophical, logical, ontological, epistemological, and methodological issues, which are more internal to research and reflect our theorisation of the world; (b) the historical, socio-political, educational and administrative issues surrounding such attempts, which are more external to research, but will inevitably influence our conduct as researchers. Lastly, some ways these problems can be confronted are put forward in direct relation to the author's own research experience.

INTERDISCIPLINARITY, CROSSDISCIPLINARITY, AND MULTIDISCIPLINARITY: WHAT'S IN A NAME?

What is meant by interdisciplinarity? In what forms is interdisciplinary work to be distinguished? What is to be expected from interdisciplinary projects in both research and education? Why should one engage in interdisciplinary efforts? What is the origin of this relatively new phenomenon? What are the effects this movement is likely to have on the organization and administration of the university? (Kockelmans, 1979).

The questions posed by Kockelmans back in 1979 and his assertion that 'there is not common agreement even about the most basic problems' (ibid, viii) continue to have resonance today, almost thirty years later.

According to Ratcliffe writing back in 1975 'a crossdisciplinary course is defined as a course of study concerned with the solution of existing crossdisciplinary problems, and a mission orientated or problem solving approach to teaching is appropriate' (Ratcliffe, 1975). In this case, the crossdisciplinary nature of the problem creates the necessity to react in a crossdisciplinary approach for study and teaching. To continue, Wilkinson *et al.* define it as 'parallel but independent lines of research in two disciplines are brought together to highlight similarities, bring a crossdisciplinary discourse that would benefit both' (Wilkinson *et al.*, 1996). In this case 'independent' lines of research find a common language. Finally, Lemon talks of common conceptual frameworks, so that communication is smoother:

A key feature of cross-disciplinary work, and particularly that which is issue orientated and crosses between policy, academic research and stakeholder involvement is the need for common conceptual frameworks. These frameworks should provide the foundation for communication between agencies while avoiding what is a misguided search for consensus. (Lemon, 2002)

From these three definitions of 'crossdisciplinary research', we get slightly different understanding of what it is or should be. In the first one, the problem creates the research, in the second, independent disciplines find a common discourse, while in the third, different stakeholders find common conceptual frameworks to enhance communication.

My own understanding is that in crossdisciplinarity there is dialogue across disciplines, not always creating a common conceptual framework or common discourse, and not always being triggered by a crossdisciplinary problem. On the other hand, in interdisciplinary research the connectivities between disciplines run deeper, common discourses and frameworks are produced and are triggered by a problem common to both disciplines. Lastly, when we talk of multidisciplinarity, it simply means that more than two disciplines are involved in these processes, which operate on a deeper level (interdisciplinary) or a more shallow level (crossdisciplinary). In essence, 'interdisciplinarity to have any intellectual or academic value, must mean more than just talking to each other across disciplines' (Hale, 2007).

Having defined the different types of research this way, I would like to follow now Kockelmans and focus briefly on the broad spectrum over which

investigations about interdisciplinarity range: 'logical, epistemological, methodological, ontological, historical, socio-political, philosophical and educational, administrative issues' (Kockelmans 1979). It would be then far easier to demonstrate ways my own research has attempted to overcome some of these issues.

Philosophical (logical, ontological), epistemological, and methodological issues

As different disciplines are grounded in diverse philosophies, ontologies, epistemologies and methodologies, and each discipline is broken down into more and more specializations, it is often argued, that it is impossible for a single individual to achieve genuine competence of their own expertise, let alone the whole discipline they are working at, and then from there to engage productively with other disciplines. Kockelmans identifies those on the one side of the debate who argue that what can be achieved instead is 'a comprehensive and integrated multiscience'. Kockelmans points to the difficulty of one scientist being able to know the developments in other disciplines, as well as dealing with different units of analysis, as 'findings from one discipline need to be adapted and then incorporated into those of another discipline, then the methods and findings can act as a check on the validity of their generalizations' (Kockelmans, 1979).

Similarly, there is Lemon complaining about one of the methodological problems involved: 'Firstly there were too few clear and grounded examples and secondly there was inadequate insight provided about how the frameworks could be "operationalised" within the research process' (Lemon, 2002). In theories of knowledge management (KM), the sharing of knowledge between actors having different scientific perspectives, Lemon argues, has received little attention in relation to multi-disciplinary problems. In their own words:

In such projects, the actors are academics, the knowledge content is diverse and shaped (and often confined) by scientific disciplines, whereas strategies to cross disciplinary boundaries seem to be lacking. These projects face the challenge of overcoming disciplinary and theoretical differences in order to reap the benefits of crossdisciplinary inquiry. (Lemon, 2002)

I would argue that complex problems create the necessity for multidisciplinary approaches, and that never in scientific revolutions and paradigm shifts, the philosophical, epistemological or methodological differences acted as a deterrent to using different lenses, and creating new lenses through which to look at novel phenomena. This is in fact

how human knowledge has moved forward. Needless to say, we are at a transition period in the global system and scientific paradigm shifts are likely to become the norm rather than the exception. Take for example the highly popular and topical study of 'globalization'. It is discussed next to culture in Sociology, next to the multinational corporation in Economics, next to the biosphere in Biology, next to World Systems in History, etc. (See Clark's 2002 *Global Awareness: Thinking systematically about the world*). In fact globalization is discussed in classrooms and funded, researched and theorised, across disciplines all over the world. Clark who offers his own multi-disciplinary approach, which he calls the Global System Paradigm (GPS), incorporating thinking on complexity, small world phenomena and network theory among others, writes:

The advantages of general systems thinking become apparent whenever we meet a novel problem or question. If a specialist in a particular field, say economics, confronts a problem from a quite different field, say biology, he or she will first have to master the vocabulary and concepts of biology before making advances toward understanding and solving the problem. The general systems thinker, however, can begin to grasp the problem from biology right away because he or she can apply the important fundamental principles of systems operations to the issue or question at hand. In this way the GPS equips us to grasp quickly the nature of a particular global problem, for example, the AIDS pandemic, even if we do not know much about AIDS per se. (Clark, 2002: p. 53-54)

In fact, it is not the 'internal' issues to research, but the 'external', the historical, socio-political, educational and administrative issues that we need to turn to, as major obstacles to the types of research we are discussing.

Historical, socio-political, educational and administrative issues

In theory, all scholars/scientists are devoted to the abstract truth and tell the story as it really is.....They fear no social pressures. They take no cognizance of pressures, financial or political, to amend their results or their report of results. It is a *nice fairy tale*, but anyone who has frequented a university or a research institution for any length of time and still believes this is consciously or subconsciously naïve. The material pressures are enormous, the career pressures almost as great, and the political pressures always available if others do not work. It is not that there are not Galileos around...*But dissent is courageous even in the most liberal of states...*One could easily explain why these four myths –the free market, the sovereign

states, the equal rights of all citizens, and the value-neutral scholar/scientist—are necessary to the functioning of the modern world-system, why they are so loudly propagated and so widely believed (at least at a surface level) (Wallerstein, 2003: p. 22; author's emphasis in italics)

Wallerstein's understanding of what is at stake here in his 'Intellectuals in an Age of Transition' (2003) is a good place to start discussing issues that are either connected to the agent or the structure, and why not, à la Giddens, the structurations and relationships between the two, constraining this type of research, which are essentially outside the research issues involved. At the level of the individual, a change in paradigm or having to tolerate meddling with one's own discipline can be a traumatic experience:

Kuhn makes it clear that most people will resist adopting a new paradigm, likely expending considerable psychic energy in doing so. "The transfer of allegiance from paradigm to paradigm is a conversion experience that cannot be forced", he writes. But why should this be so? At the level of the individual, the problem is one of identity. To a certain degree, all of us shape our vision of our own identities around a paradigm's central premises and values; to cast off that paradigm and embrace a new one means a change in identity as well. To many, such a change may be as traumatic as say, a new religion or national citizenship. (Clark, 2002: p. 39-40)

And on a structural level, things do not fare much better:

At the level of institutions, more material interests are at stake. Budgets and personal decisions are made on the basis of a paradigm's description of problems to be solved and how solutions are to be sought. To introduce a challenging paradigm means the relocation of funds and bureaucratic power. Those already entrenched will resist efforts by the advocates of the new paradigm to unseat them and reallocate resources. (Clark, 2002: p. 39-40)

We have witnessed this in relation to the paradigm shift with complexity and chaos theory in the positivistic sciences. It comes as no surprise that there is a fear of the unknown, to the extent that some academics complain that new paradigms find resistance from staff and students, are boycotted, not funded, not published or fail immediately to acquire a concrete discipline status, while others point to the danger of embracing new interdisciplinarity with open arms. As Hale (2002) warns, disciplines are characterised by key players, key debates, key journals etc which are underpinned by power relationships, and she warns:

So, as academics we need to bear in mind the potential dangers of embracing the new interdisciplinarity with open arms. On the other hand, if writers like Baetens are correct, in identifying the new impetus for interdisciplinarity as being driven by managerial and financial rather than academic and intellectual concerns, there is little that we at the end can do about it, and we will have to adapt to working within the new paradigm and doing our best to mitigate its worst effects. (Hale, 2007)

Perhaps this fear is directly related to institutional attempts at training interdisciplinary individuals. Kockelmans warns us that in our modern world there is no longer a room for such a Leonardesque aspiration, as these attempts produce shallowness and a lowest common denominator breadth is developed. He thinks that scientific knowledge and competence cannot be found in single individuals, so that 'now it becomes clear that the locus of knowledge is shifting from individuals to groups' (Kockelmans, 1979).

Finally, it is vital to accept Kockelmans's assertion that disciplines cannot develop without crossborrowing, and that interdisciplinary approaches to education promote integration of knowledge, freedom of enquiry, and intellectual curiosity. We should also accept that extensive reforms are needed to deal with the following: the limitations found in the middle ages origins and the blind spots in the administrative arrangements of the contemporary educational system; the serious intellectual and social discontinuities caused by 'ethnocentrism and in-group partisanship in the internal and external relations between academic disciplines, university departments, and scientific organizations and institutions' which 'leads to a redundant piling up of highly similar specialities, while leaving great interdisciplinary gaps' (Kockelmans 1979); and resolve practical matters by organizing and integrating knowledge along different lines. Only then, we as academics can move beyond the external problems of interdisciplinarity and concentrate on the real ones, which is really what we are interested in, in the first place.

CONFRONTING ISSUES, DEEPENING RESEARCH LEVELS, AND JUGGLING MULTIDISCIPLINARITY: EXPANDING RESEARCH ON CYBERCONFLICT

For my doctoral work *The Politics of Cyberconflict* (2006), I argued that it was necessary to engage with theories and methodologies belonging to a variety of disciplines and their respective literatures, in order to explain the phenomenon of 'cyberconflict'¹ (i.e. conflict in computer mediated

¹ For more on this definition see <http://www.p2pfoundation.net/Cyberconflict>

environments). Identifying the different elements from these disciplines to create an integrated theoretical framework caused an avalanche of problems, some internal and some external to the research. Nevertheless, to this date, *The Politics of Cyberconflict* is the first and only book in this area, while a Cyber Conflict Studies Association was established in the U.S. in 2003. A further edited volume of colleagues doing similar research is coming out this year (Karatzogianni, 2008).

On the internal level (*philosophical, epistemological, and methodological issues*), the initial empirical observation and subsequent analysis identified in terms of politics, two types of cyberconflict: one involving ethnoreligious groups engaging in hacking, propaganda, recruitment, for example the transfer of 'real conflicts', such as the Israeli-Palestinian one to the internet, and another type involving socio-political groups such as the antiglobalization movements or the anti-war protests of 2003 (Karatzogianni 2004a; 2004b; 2005). This crude initial categorization led to the use of social movement theory/resource mobilization and media theory (to engage with the new media element) for socio-political cyberconflicts and conflict theory/analysis and media theory for ethnoreligious cyberconflicts. At the same time, as the environment of cyberconflict involved an understanding of how the internet works, there was need to engage with internet security, cyberculture (including postmodern theorising), while including notions of information warfare and the revolution in military affairs. This amounted to diverse sets of literature in disciplinary subareas, and consistently meddling in other academic turfs rather than my own, which was at the time International Relations. On this theoretical level the research was multidisciplinary. In terms of political philosophy, the research embraced the openness of networks, rhizomatic structures and movements and their revolutionary potential in relation to hierarchies (for example see Deleuze and Guattari, 1987). Methodologically, it involved critical discourse analysis and survey of opinion and content, pointing more to a 'qualitative' approach, using tools that only some of the disciplines had in common. In the methodological sense then, the research was mostly, but not always (for example internet security methods were not used) interdisciplinary

As research progressed confronting the problem of identifying the right units of analysis, the right theoretical elements from the other disciplines and so on, I found that presenting work on diverse and specialist conferences and talking to experts particular to the specific area I was developing was the answer to the theoretical problems, and often to methodological ones too. For example, I attended conferences on Information warfare and Security, Social Movements/Alternative Futures/Popular protest, Conflict Research, Politics and IR, Interdisciplinary panels on specific conflicts, Global Communications Research and later Globalization, Small states and Virtual

states. Engaging with specialists from these subareas and discussing other case studies relating to their disciplines, ensured that the application of these theories to my own case studies was as valid as possible.

In terms of the external problems (*historical, socio-political, educational and administrative issues*) I had to constantly justify the need for a framework and the use of the different theories to research panels and upgrade panels and other PhD colleagues in my Politics and International Relations department at the University of Nottingham, which was a great exercise (apart from the rare feeling that other people found my research mumbo jumbo). In administrative terms, the viva examination had an IR specialist as an internal, and a communications specialist as an external. The differences of philosophical, political and methodological approaches between the external and myself (for instance the more classic approach to communication and my more postmodernist position in relation to the internet) caused some serious problems, but eventually enhanced the quality of the work. On a less serious level, but very important nonetheless as the subject was fairly new, it was very hard to find material and inter-library loans helped to address the lack of literature being locally available, as well as using online journals. In educational terms, I was teaching Global Politics and Political Theory mostly, not directly relevant to the research. In career terms, the term 'academic orphan' came to mind, as International Relations saw me as Communications, Communications as Defence Studies, and Defence Studies probably as too political. That meant that I was applying for posts in all areas, and research in the IR field as well to ensure I stayed in that game too. After a year's post at the Global Communications department at the American University in Paris (there besides media, teaching a course for their Politics department), I returned to the UK as a Lecturer in Media, Culture and Society at Hull.

CONCLUSIONS

Currently, I am expanding the cyberconflict model to include cultural and socioeconomic cyberconflicts, by looking at small states, minorities, 'wanna be' states and their representations in cyberspace and also peer-to-peer networks and alternative politico-economic models (see Karatzogianni 2008). These case studies will be also used in *Power, Resistance and Conflict in the Contemporary World* co-authored with Andrew Robison (forthcoming 2009), where we are exploring the effects of the internet and of networked organizational forms for social movements, international relations and theorizing the current situation. Using the theories of Gramsci, Zizek, Deleuze/Guattari, Hardt/Negri and Baudrillard, by nature a multidisciplinary reading, we are developing a theory to account for

changes in the nature of war, politics and resistance, with particular reference to foreign policy, the wars in Iraq and Afghanistan, and peripheral resistances to U.S. hegemony. We seek to reinterpret World Systems, reading the world system as an arborescent assemblage and attempting to understand resistance and opposition movements in terms of a combination of networked rhizomes and the assertion of reactive ethnoreligious identities.

Many times in the last eight years, I have complained² and cried in the face of others commenting that 'Others tried and failed - what makes you think you can pull this off?' Then I realised despite the inevitable problems outlined in this paper, that multi-disciplinarity bears the most beautiful fruits of them all, and however media and politics students fight in my modules over if this is too media or too politics, I always wink at the part of reality that promises me even more of this, if I am brave enough to confront these challenges head on. And as my colleague and friend Petros Ioannidis signs his emails: 'It is not because things are difficult that we dare not to venture... It is because we dare not to venture that things seem difficult...' (Ovidio, 43 BC – 17 AD).

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² For a personal account of this see <http://rccs.usfca.edu/bookinfo.asp?BookID=385&AuthorID=134>

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