Winning back more than words? Power, discourse and quarrying on the Niagara Escarpment

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This paper explores the controversy and public hearing on the proposed extension of the largest limestone quarry in Canada, operated by Dufferin Aggregates at Milton, Ontario. The quarry constitutes an important source of construction material for the nearby Greater Toronto Area. However, the quarry is protected by the provincial Niagara Escarpment Planning and Development Act and located inside the UNESCO-designated Niagara Escarpment Biosphere Reserve. The proposal has therefore attracted considerable opposition from the public institution charged with its protection, the Niagara Escarpment Commission, as well as environmental groups and local residents. To make sense of the tensions, conflicts and outcome of the Dufferin case, we consult and apply several critical literatures. We see the conflict as part of a transformation of the countryside from a space of production to a space of consumption, where there is a shift in emphasis from resource extractive to scenic and ecological landscape values, and the displacement of productive classes, farmers and workers, in favour of a service class of professionals and retirees. Within this transformation, we identify a ‘power geometry’ of actor networks of different coalition groups that form allegiances and engage in struggles at different geographic scales. These actor networks are identified in this paper and contrasted with the public sphere. This paper concludes that while the public sphere is an important component in the debate on the Dufferin case, it is not the only one. It is argued that the public sphere is limited in its capacity to address the broader social, economic and environmental issues at stake. The public sphere is also limited in its capacity to address the broader social, economic and environmental issues at stake. The public sphere is also limited in its capacity to address the broader social, economic and environmental issues at stake.
networks operate within the set frames of a dominant development discourse and a popular environmentalist discourse that both include and exclude other ways of seeing and managing the escarpment.

Introduction

Rural areas change in response to social, economic, environmental and political factors. In recent years, this change has quickened and rural areas in developed market economies are diversifying and expanding as a result of broader socioeconomic shifts. In many places, the countryside has transformed from a space of production to a space of consumption, where the old primary production activities, such as mineral extraction, forestry and farming, are challenged to make room for new consumption-oriented activities such as housing, recreation, leisure and environmental conservation. In turn, these changes create new and locally specific accumulation opportunities, making rural areas the focus for new power relationships, ‘actor networks’, development discourses and social and political conflicts (Cloke and Little 1997; Haan and Long 1997; Furuseth and Lapping 1999; Walker 2003). The struggle between the aggregate industry, pit and quarry operators that produce essential construction materials, and local communities is one example where new uses and values define the countryside and the decision-making process.

In the Niagara Escarpment region close to the Greater Toronto Area (GTA), Canada’s major metropolitan area, the struggle between the aggregate industry and exurban communities’ physical presence and amenity aspirations is especially intense. The Niagara Escarpment is a major limestone outcrop that extends from Niagara Falls in the south to the Bruce Peninsula in the north. It has held the status of an aggregate, recreational, natural and scenic resource for a large part of the twentieth century. Concern for its protection was first expressed in the 1950s and 1960s when local aggregate producers intensified their operations. This process culminated when one company, Dufferin Aggregates (hereafter Dufferin), created a ‘gap’ in the escarpment that became visible from the well-trafficked Highway 401 that runs from the Québécois border in the northeast to Windsor in the southwest.¹ The ‘gap’ triggered the creation of the Niagara Escarpment Planning and Development Act (NEPDA) and the Niagara Escarpment Commission (NEC) in 1973. The Commission consists of a bureaucracy of planners and scientists as well as seventeen government-appointed commissioners that vote on approval or rejection of development applications. With a mandate to prepare a plan, the Commission created the Niagara Escarpment Plan (NEP), which was approved in 1985. With the support of all three political parties in the provincial legislature, the Plan became Canada’s first large-scale environmental land-use plan formulated under specific provincial planning legislation, containing a gradation of land use zones, from protective, rural, and mineral resource extractive (Borodczack 1995; CONE 1998). In 1990, the environmental significance of the Niagara Escarpment was recognised internationally by its designation as a UNESCO World Biosphere Reserve.

The conservationist aspects of the Act are, however, tempered by the fact that some development is allowed within the escarpment boundaries. The Act is in fact a development measure that treats protection as a constraint rather than a priority to development and the NEC approves more than 90 percent of all development applications. There is no program in place to track NEC decisions for

¹ Dufferin is part of St Lawrence Cement that operates three divisions in North America, Ontario, Québec and the Maritime provinces and northeastern United States. A Swiss transnational corporation, the Holcim Group, owns 64 percent of St Lawrence Cement through Holcim (US) Inc., an American subsidiary. Holcim is active in seventy countries and has an annual production capacity of 140 million tonnes of cement (Holcim 2004).
consistency of application of development criteria and conformity with plan policies. With regard to aggregate production, various grandfather clauses allow the continuation (but not expansion) of aggregate pits in operation before the Act came into effect. In some cases, though, amendments of the Act and Plan may allow new aggregate development schemes (CONE 1998).

Arguably the most controversial application to amend the NEP was considered in January 2001, when Dufferin filed applications with five municipal and provincial agencies, including the NEC, for an extension of its main quarry north of the 'gap' (Figure 1). The proposed expansion was for eighty-three hectares, which will, if approved, enlarge the existing 468-hectare quarry by 18 percent and extend its life by ten to twelve years (Lovio 2001). The expansion entails a six-part approval process involving an amendment to change the area's designation from an Escarpment Rural Area to a Mineral Resource Extraction Area under the NEP, amendments to three regional and town plans, the issuing of a NEC development permit and a license from the Ministry of Natural Resources under the Aggregate Resources Act (Cone 2001; Lovio 2001).

The proposed quarry expansion began with pre-consultation meetings with Dufferin, various local, regional and provincial review agencies in early 2000. Each approval process allowed the public to ask questions and comment on the proposal. A Joint Agency Review Team (JART), headed by the NEC, conducted a coordinated and comprehensive review of the application through various ecological and hydrological sub-committees meeting at regular intervals between June 2000 and December 2001. Because of the complexity of the case, this process was intended to reduce duplication of effort, allow sharing of particular expertise and provide an overall efficient process for stakeholder and public participation (Johnston 2000). JART completed its review in January 2002 and recommended that the extension not proceed. It then permitted the submission of any new information from Dufferin to assist in clarifying the outstanding technical matters. On 17 October 2002, the NEC defied the recommendation by JART and voted twelve to five to approve Dufferin's proposal (Funston 2002). Shortly prior to the decision, Commission planner David Johnston was reportedly ordered by Director Mark Fraley and Chairman Don Scott to prepare an alternate recommendation to approve the plan with some environmental conditions (Funston 2002). Though not unprecedented, this was a highly unusual practice, especially for such a contentious issue.

Though there are still a few hurdles, the Commission's decision constitutes a significant step towards final approval. In this paper, we theorise and provide an account of the complex dynamics, contradictions and conflicts leading up to the NEC's decision. In studying such conflict, we take our cue from Murdoch and Marsden (1995, 373) who argue that a 'close examination of the "concrete" [can] lead to an understanding of more general processes'. By studying one event or sequence of events in depth, a case study can allow theoretical concerns to be grounded in observation. In the first section of the paper, we explore the 'contested countryside' and the significance and potential outcome of Dufferin's proposed quarry extension. The contested countryside contains development interests that play a leading economic and political role but are challenged and increasingly opposed by groups with a conservationist ethos. Within this contested countryside, we examine environmental conflict as a process involving several interest groups and numerous social spaces for the same geographical area, each of them having its own logic, its own institutions and network of actors (Marsden et al. 1993). Massey (1991, 25) depicts this hierarchical process as a 'power geometry'. It directs attention to how the processes of rural transformation and class formation are adamantly connected and to the ways and means by which actors formulate goals and seek to achieve them (Ilbery 1998).

In the second and more substantial section of the paper, we draw on post-structuralist studies that recognise that social alliances and frictions can occur beyond material interests and that discourses that contain specific languages, words and symbols play a role in determining the resolution of resource conflict. With discourse we not only refer to a language of signs and representations that are articulated consciously in a 'war of

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2 Applications for development actually rose from 700 a year in 1975 to about 1,500 in 1990–1991 (Estrin and Swaigen 1993, 310). In 2003, the NEC received close to 600 development applications.
Figure 1
Niagara Escarpment Plan Area and the Dufferin Aggregate Extension
words’ by material interests, but also to the frames that are unquestionably subsumed by interested parties and that define the terms of engagement of a particular conflict. The nearly two-year long hearing on the environmental effects of the extension represents a fertile ground for identifying a dominant and popular discourse that reflects, includes and excludes various perspectives. We here empathise with Murdoch and Pratt (1994, 85) who argue in favour of rural studies that can reveal the discourse of the powerful and ‘the means by which they make and sustain “their” domination (in the hope that such knowledge could become a “reservoir” to be drawn upon by oppositional forces)’. A discursive analysis could also ‘influence the decisions of the “powerful” such as policymakers in the hope that they might be persuaded to produce more effective and just intervention in the world’ (Murdoch and Pratt 1994, 85). It was on this assumption that we made our own interventions in the debate in support of the post-productivist forces. We were inspired by the previous work of a group of sociologists/activists at Laurentian University who have provided several detailed studies of the hearing on the establishment of two pulp and paper mills in northern Alberta. In Winning Back the Words, Richardson et al. (1993) argue that local activists were able to challenge the expertise of industry and government on the social and environmental impact of the pulp and paper mills. Yet, the government decided to approve the establishment of the mills. We are hopeful that we will be able to contribute to an environmental intervention that will win back more than words though we do recognise that in this instance the productivist forces remain strong and it is likely that the Dufferin extension will be approved. We also acknowledge that both the dominant and popular discourse often speak for elite groups that make unintelligible the voices and interests of other, often marginal social groups.

The documents, public submissions and transcripts of the public hearings surrounding the Dufferin extension constitute the main sources of documentation. We ascertained the nature of the various discourses to Dufferin’s proposal through a qualitative analysis of the numerous public submissions and meetings at the Town of Halton Hills on 22 May 2001, at the Town of Milton on 28 May 2001, at the NEC on 31 June 2001 and the final decision on 17 October 2002. We have also consulted other relevant public documents and the provincial and local newspaper records.

**Productivists, Post-Productivists and the Aggregate Network**

In a recent review of the geography of rural change, Phillips (1998) identifies a set of studies that focuses on the tensions and conflicts in the transformation of the countryside from spaces of production to spaces of consumption. This process has seen the decline of productive classes, farmers and workers in the resource extractive sectors, and the emergence of a service class, typically professionals and/or retirees (Phillips 1998). Marsden et al. (1993, 188) define the consumptionist rural landscape as a ‘preserved landscape’ where the reconstitution of rurality is highly contested and often controlled by articulate consumption interests that use the political system to protect their positional goods. They describe the productivist rural landscape as a ‘contested landscape’ where decision making reflects local economic priorities and ‘development projects’ are likely to cause less contention (Marsden et al. 1993, 188). Such a conceptualisation corresponds closely to the tensions in the Niagara Escarpment region where the promoters of the aggregate industry clearly represent a productivist landscape whereas their opponents represent a post-productivist (or consumptionist) landscape.

This conceptualisation does not, however, take sufficient account of the specific processes and dynamics that determine the outcome of this tension. Murdoch and Marsden (1995) provide insights into such conflicts. They view ‘locality as a space that is constituted by a variety of different associations or networks of relations operating across varied scales and distance’ (1995, 377). The ‘power geometry’ of the minerals planning framework contains an elaborate regulatory framework. Murdoch and Marsden (1995) argue that the planning system particularly acts to protect mineral reserves against other forms of development, to implement restoration, rehabilitation and after-use efforts of mineral sites, and to be aware of available sites to be exploited. Aside from these responsibilities, the authorities are sympathetic to the demand for minerals in order to allow the industry flexibility to follow market fluctuations. The minerals planning network is
tied to the level of construction activity in the economy and has a critical role in ensuring a continued supply of aggregate to fuel economic growth. Murdoch and Marsden (1995, 373) contend 'forecasts of minerals demand are passed through a hierarchy and at each stage are translated into a set of requirements that define new actor spaces, drawing them into the network in a tightly controlled way'.

In Ontario, the provincial government has historically designed policies to encourage the location and expansion of pits and quarries near the major markets. At present, the Ontario Smart Growth Plan and the Ontario Provincial Policy Statement (OPPS) provide the general support. The latter states that as 'much of the mineral aggregate resources as is realistically possible will be made available to supply mineral resources needs, as close to markets as possible' (OPPS 1997). Local planners are guided by forecasts of aggregate demand and growth to find sites that facilitate the extraction of required amounts of minerals (Baker et al. 2001). The aggregate actor network is composed of the aggregate industry, road builders, home developers and consulting firms and the provincial government. A few large companies, most of them transnational corporations, are responsible for the majority of the production. They are joined by companies such as Con-Drain (sewer and watermain contractor), Con Strada Construction (road building), Con Cast Pipe, Con-Elco (utilities) and Metrus Development (housing) that are major consumers of aggregates. Consulting firms, such as ESG, HMBC Planning Limited, Ecoplans and Golder VME Limited, are other constituents of the network that are hired by the development/construction industry to conduct and prepare technical studies.

The management of aggregates resides formally with the Ontario Ministry of Natural Resources (OMNR), Natural Resource Management Division, Lands and Waters Branch and Aggregate and Petroleum Resources (Gravel Watch 2004). Since 1997, however, the control has been delegated to the Aggregate Producers Association of Ontario (APAO), a registered lobby group whose objective is 'to be the single voice of the aggregate industry with government to positively influence legislation, regulation and policy to the benefit of the citizens of Ontario, as well as the industry' (APAO 2004). One branch of APAO, the Ontario Aggregate Resources Corporation (TOARC), controls and manages the Aggregate Resources Trust that consists solely of government (OMNR) funds raised mainly from haulage fees. TOARC uses some of these monies for its own administration and for compiling Ontario statistics on the aggregate industry (Holt and James 2003). The majority of the fees, Cdn$8.2 million of Cdn$8.8 million, however, is passed on to the OMNR and municipal governments. Another branch, the Management of Abandoned Aggregate Properties Program (MAPP), is dedicated to the rehabilitation of abandoned aggregate pits and quarries. APAO appoints all of TOARC’s directors, most of who have at one time or another been directors of APAO.

According to one observer, such 'labyrinthine interconnections of APAO, OMNR, TOARC and MAPP, involving potential influence and government funds, are rife with potential conflicts of interest' (Holt and James 2003, 9). During the reign of the recently defeated Progressive Conservative government, for example, it was common to see the premier and other prominent provincial politicians and bureaucrats attend meetings arranged by APAO, praising the industry and dispensing awards for rehabilitation achievements (IN AGGREGATE 2003; APAO 2004). An additional ingredient in the 'power geometry' of aggregate production is the Ontario Municipal Board (OMB), an allegedly independent, quasi-jurisdictional administrative tribunal whose function is to resolve appeals from planning decisions made by municipal councils and local committees, either in pre-hearing procedures or by holding public hearings (Chipman 2002). Though the board is mandated to balance all competing factors, it addresses environmental policies infrequently (Chipman 2002). In addition, the streamlining mechanism of the joint hearing of the OMB and Ontario’s Environmental Assessment Board has done little to satisfy environmental considerations (Estrin and Swaigen 1993). Former Mayor of Toronto John Sewell and Councillor Joe Mihevc argue that the board ‘has not acted as a good arbitrator of planning issues but as a tool of the developers’ (Barber 2002, 1; Sewell 2002, 1). With respect to pits or quarries, the recommendation is routinely approved, with board members stating, ‘regrettably, gravel is where you can find it’ (Estrin and Swaigen 1993, 753). In these situations, the board has primarily relied on the ability of the
minister to impose conditions (which the NEC has already done in the Dufferin case) on the license (Estrin and Swaigen 1993).

During the provincial Conservative governments of premiers Harris and Eves from 1995 to 2003, the effectiveness of the NEPDA (2000) and Commission was further undermined. In 1996, the NEC budget was cut from $2.4–1.6 million annually; staff was reduced from forty to twenty-three, and one of the Commission’s offices in Grimsby was closed (Foster 2000). This has meant that enforcement capacity of the Commission has been severely compromised. Some observers go as far as to suggest that the budget reductions have threatened the collapse of the Commission’s already complex approval system (Foster 2000).

Parallel to this development, the Harris and Eves governments handpicked pro-development Tory supporters for the Niagara Commission. The majority of the current commissioners are largely supportive of pro-development activities and in some cases openly hostile to the NEP. Many of the commissioners have worked as directors or are active members of the Canadian Manufacturers Association, Planning and Economic Development Departments and Chambers of Commerce. Other commissioners are currently working as real estate brokers or own residential, industrial and commercial construction companies. One commissioner is a former president of Seeley and Arnill Aggregates Limited and former president and board member of the APAO (NEC 2003).

Post-productivist forces in the aggregate field of the Niagara Escarpment are represented by the administrators and scientists in charge of making recommendations on development applications and plan amendments under the NEPDA and Plan, a wider set of environmental non-governmental organisations, and a powerful service class of local professionals and retirees. Within these categories, individuals often occupy multiple roles depending on their specific circumstances in time and space.

The staff of the NEC is clearly an important agent in support of a post-productivist landscape. Supported by the Act and Plan, the Commission staff is committed to maintain, monitor and protect the biodiversity of the Escarpment and its character as a ‘continuous landscape’ feature. The Commission staff was instrumental in seeking world biosphere designation for the Escarpment and is closely connected to international and national networks of other biosphere reserves.

At the provincial/regional level, the Environmental Commissioner of Ontario, an independent auditor and monitor of environmental issues in the province, provides its own initiatives and opportunities for citizens to question the behaviour of the aggregate industry. In his latest report, the Commissioner identified the increased negative environmental impact and community conflicts flowing from the increased amount of aggregates extracted for road construction (ECO 2003). Gravel Watch, a small citizens’ group, recently used the Environmental Commissioner’s Office to lodge a complaint against the aggregate industry’s failure to meet the rehabilitation stipulations in the Aggregate Resources Act. On 31 January 2004, the OMNR accepted the request (Gravel Watch 2004).

Various environmental groups, such as the Sierra Legal Defence Fund, the Federation of Ontario Naturalists, the Canadian Environmental Law Association and the umbrella organisation Coalition on the Niagara Escarpment (CONE), speak loudly for the protection of the Escarpment. Protect Our Water and Environmental Resources (POWER), Coalition Opposed to Paving the Escarpment (COPE), Keep the Escarpment Protected (KEEP) and the Halton/North Peel Naturalist Club have all emphasised the purpose of the NEP and the significance of the United Nations World Biosphere Reserve designation. At the local level, residents, frequently professionals and/or wealthy retirees, provide vocal and often informed comments in the debate.

Productivist forces, then, are represented by the aggregate industry, its representatives and dependents, powerful pro-development forces in the provincial government and, paradoxically, parts of the NEPDA and the politically appointed commissioners in charge of making decisions on the recommendations and plan amendments of its staff. Just as there is a development network of actor spaces, there is essentially an anti-development network of actor spaces extending from the international (biosphere reserve concept) to the national and regional (environmental groups), to local actors and back again. These networks of actors or ‘collective actors’ operate as ‘a coalition of actors who at least at a given moment, share some common definition of the situation, or
goals, or values and who agree, tacitly or explicitly, to pursue certain courses of action’ (Haan and Long 1997, 8). Networks of actors can ‘meaningfully be attributed with the power of agency that is the capacity to process experience, make decisions and to act upon them. These collective actors may be informally or formally constituted and spontaneously or strategically ‘organised’ (Haan and Long 1997, 8). The issue then, is ‘how these actors struggle to give meaning to their experiences through an array of representations, images, cognitive understandings, and emotional response’ (Haan and Long 1997, 4).

Discursive Battles

In discursive battles, actors attempt to make and sustain ‘their’ domination and in the process undermine the credibility of the other side. Roger Andersen (1988, 9, 285) emphasises that, ‘behind many of the variations in language use lie differences in social power’ and that ‘social power can be created and justified through discourse and practices shaped by language’. At public hearings, participants can question the social authority of the dominant discourses and challenge their assumptions and conventions (Gismondi and Richardson 1994). It is therefore useful to pay attention to the variations in language and how they relate to actual users in specific situations in order to fully comprehend the outcome surrounding conflicts over large-scale development projects. These variations can take various forms: struggles between experts, struggles between lay people and experts, struggles over who can speak with authority on a subject, struggles over the meanings of words and concepts and struggles over values. In general, the proponents and opponents of a productivist landscape dominate the discursive battle of the Dufferin case.

The concept of discourse is not only about a war of words. It is also about the frames that set the terms of engagement within which material and rhetorical struggles occur. As writers like Foucault (1977) and others suggest, discourse here is something that works at the level of the unintentional or unconscious. Productivists and post-productivists want certain things, and those desires are shaped by discourse, and agency and intentionality cannot be ascribed in such calculations. In spite of various discourses including and excluding certain interests, their frames may overlap and may be unquestioned by the stakeholders involved in various struggles. In the last sections of this part, we challenge the productivist and post-productivist monopoly in the Dufferin extension debate and argue for positions that challenge the very frames that define the struggle.

Discourse in a productivist landscape: supporting the Dufferin’s quarry extension

The discourse surrounding Dufferin’s promotion of the quarry extension contains four distinct narratives: the ‘need’ narrative, the ‘good corporate citizen’ narrative, the doctrine of ‘good work practices’ and the rehabilitation narrative referred to as creating a ‘living quarry’. In the following, we subject these narratives to close scrutiny. As each of them act to support a defence, they are conceptualised as supporting a productivist landscape.

The ‘need’ or ‘demand’ narrative is supported by mineral forecasts that are advanced by a series of actors starting from the national to the local level and ranging from the industry to its workforce. The need narrative places great emphasis on the project growth in the GTA and the regional demand for aggregate. Various facts and figures are presented to show that there is an economic and social ‘need’ for aggregate. Accordingly, Dufferin emphasises that annual aggregate consumption in Ontario grew from 160 million tonnes to 216 million tonnes from 1994 to 2000 (APAO n.d.). APAO points to the fact that more than sixteen tonnes of aggregate are used per person, per year in the province, and over 440 tonnes of aggregate are used in the construction of every house (APAO n.d.). One of the biggest users of aggregates, accounting for 53 percent of annual consumption, is roads and highways (APAO n.d.). This is evident with the construction of Highway 407 using nearly ten million tonnes of aggregate extracted from the Niagara Escarpment, and the recently approved mid-peninsula highway (Dexter 2000). The Greater Toronto’s $33 billion-a-year construction industry consumes about five million tonnes of aggregate (worth $1 billion) a year. With the projected growth in the GTA (2.2 million people over twenty-five years) and projected aggregate demands (1.5 billion tonnes), Dufferin argues that there is a critical need for competitive, close to market, high-quality crushed stone (Dufferin Aggregates 2001).
The ‘need’ narrative also emphasises the employment offered by the aggregate industry. More than 7,000 people work directly in aggregate production in Ontario and more than 34,000 are employed indirectly in services such as transportation and equipment sales and services (APAO n.d.). From the existing operation, Dufferin claims economic benefits include direct employment (120 jobs) and spin-off employment (340 jobs) supported by the quarry’s annual expenditures of $40 million for products and services (Dufferin Aggregates 2001). Within the national local hierarchy, the aggregate industry is presented as a foundation of society and economy. The forecast of aggregate demand and employment generation is Dufferin’s main strategy in illustrating the ‘need’ for minerals. Therefore, by incorporating the representations, social relations and calculations or forecasts in their ‘need’ argument, Dufferin seeks to capture the attention of the planning authorities, decision makers and the provincial government.

A second significant aspect of Dufferin’s discursive strategies is the use of a ‘good corporate citizen’ narrative. The company presents itself as a ‘community relations award winner’, which conducts its business in a sustainable manner. Davies, (2002) general insights into power and actor networks give context and meaning to the discourse used by Dufferin and representatives of the aggregate industry to attempt to consolidate and define its operations within partnerships. Dufferin thus presents itself as closely knit to various local schools, naturalist groups (like the Boy Scouts), local and regional municipalities, the Conservation Authority, the Ministries of Natural Resources and Environment and Energy, the NEC and the Bruce Trail Association (Dufferin Aggregates n.d.). Because the Bruce Trail crosses over many sections of the quarry, Dufferin has fostered an image of itself as a gracious corporate host and a generous donor to the Bruce Trail Association (Dufferin Aggregates 2001). Important networks also exist with the Communications, Energy and Paperworkers Union of Canada and Dufferin employees. Members of these groups stress that Dufferin has been part of the community for thirty years and is ‘caring, conscientious and striving to meet the goals of the employees as well as the community’ (Reynolds 2001, 1). Dufferin is portrayed as an essential part of a business alliance where its success inevitably determines whether other companies, particularly construction companies, will continue to grow and prosper. Most of the public submissions in support of the expansion are from big businesses, such as Con-Drain and Con Strada Construction, which contend that ‘a continuing supply of competitively priced, high-quality aggregate from the Milton Quarry is essential to the development of the surrounding area’ (Coyne 2001, 1). Dufferin points to such ‘constructive partnerships’ as a convincing defence for its proposal. The company labels itself an important contributor to the economic, social, educational and cultural life of the community by sharing in community events, offering their grounds for educational purposes and supporting the community through donations.

The doctrine of ‘good’ work practices builds on the binary opposition between science and environmentalism, which suggests that ‘scientists deal objectively with facts whereas environmentalists deal with emotions and value’ (Richardson et al. 1993, 45). Technical reports articulate expertise to convince opponents and decision makers that proposed operations have been carefully planned. Dufferin’s studies thus claim that impact levels concerning noise controls, blasting design, dust suppression and maintenance of water supply are ‘within required provincial guidelines’ and will be ‘closely monitored’ (Dufferin Aggregates 2001, 4). Technical reports and detailed site plans of recharge wells, environmental buffers, edge management and enhancement measures and rehabilitation are used to illustrate that all necessary precautions are taken to protect groundwater and habitat for vulnerable, threatened and endangered species (Dufferin Aggregates 2001). Dufferin’s employees vouch for their ‘good’ work practices, one stating (Dorst 2001, 2–3): ‘...I have seen this company continue to grow with its commitment towards community relations and environmental issues concerning the extraction, processing and delivery of the aggregates...no longer is it just blast the limestone out and ship it to our customers’.

Dufferin’s doctrine of ‘good’ work practices is also illustrated in the argument that their application conforms to government policy, particularly the Provincial Policy Statement, Smart Growth and the Kyoto Protocol. Accessing the resource close to market reduces the delivery costs, lowers the
social impact (less trucks pass fewer people) and minimises fossil fuel consumption and the environmental impact of truck emissions. Although it can be argued that Dufferin is simply hiding behind these conventions (or clichés because they are so casually used), the fact remains that the Ontario government policies have consistently been designed to encourage the location and expansion of pits and quarries near major markets to ensure a continued supply of cheap aggregate. Overall, with scientific expertise, the design of management plans and restrictive conventions, Dufferin attempts to depict itself as having a genuine concern for the natural environment and a moral responsibility to act as stewards.

In partnership with the APAO, Dufferin proposes that rehabilitation of extraction sites does not only entail creating new utility landscapes for recreation and farming, but also the provision of after-uses that maximise biodiversity and increased ecological values. This is illustrated by pit and quarry rehabilitation success stories where Dufferin uses powerful metaphors such as ‘natural environment’ and ‘living quarry’ to conceptualise their ability to bring back all the plant and animal life that may have been there previously. Rehabilitation is presented as a management ‘fix’ to disturbed landscapes, capable of staggering possibilities such as creating a naturalised, ecologically productive landscape, promoting biodiversity and natural succession and creating benefits for the public and private sectors by balancing mixed uses of natural heritage conservation, recreation, education and tourism uses. An APAO representative (Fraser 2001, 3) stated: ‘I am sure that many of you have had the opportunity to see Dufferin’s first phase of rehabilitation and the great job they are doing of what is referred to as “landform replication”. They are literally replicating the escarpment environment, creating escarpment cliff and talus slopes within their quarry, which creates the rare habitat that makes the escarpment special.’ A worker (Dorst 2001, 2–3) echoed the same sentiments: ‘A lot of thought and design go into putting the earth back along the quarry sides. Making it ready to be planted with various trees that would normally go there...We continue to rehab areas of the operation that have been extracted out, preparing these areas to return back to the natural state. I now understand the importance that good rehabilitation has, not only to the company and the environment but also to the community that the quarry is in’. Sarah Lowe, Dufferin’s property and resource manager describes their rehabilitation methods with metaphors such as a process of making things ‘natural’ where ‘you feel like you’re playing God’ (Longbottom 1998). These metaphors mask the detrimental impacts the development has on local communities and on the Escarpment. With their use, an argument is constructed that ‘aggregate extraction has an important role in maintaining a mix of landscapes, habitats and species and providing conditions for unique plant and animal communities’ (APAO 2001, 4–5). Terms such as ‘living quarry’, ‘natural state’, ‘natural environment’ and ‘landform replication’ advance a particular version of ‘the truth’ about aggregate operations that conceal their true impact and the actual areas of pits and quarries that are disturbed (plant life removed, soil removed, overburden removed, etc.) but not rehabilitated (Holt and James 2003, 4).

In summary, through language and power, project proponents such as Dufferin typically paint their proposals as environmentally sound and economically appropriate. When a project gets to the stage at which a public hearing is held, project proponents invariably commit large sums of money to the project and have already secured support from the government (Richardson et al. 1993). This power imbalance is what makes project proponents so convincing and extremely influential. Dufferin is clearly very confident in obtaining approval for its proposal.

Discourse in a post-productivist landscape: conceptualising opposition to Dufferin’s quarry expansion

The counter-discourse of the Dufferin’s proposed quarry extension supports an anti-development network and a post-productivist landscape. This is tied to environmentalist concerns that value ecological integrity, biodiversity and landscape protection. It is also connected to the protection of various local ‘quality-of-life’ issues. Perhaps the bureaucrats of the NEC and the JART articulated the most powerful statement of the post-productivist landscape. The imagery of the NEC is replete with references to the historical significance and unique position of the NEPDA and the NEP in protecting a spectacular landform. The
biosphere reserve concept is also used liberally and the Escarpment is routinely mentioned in the same breath as Ecuador’s Galapagos Islands and Tanzania’s Serengeti as ‘internationally significant ecosystems’ (ONE 1997). Using the language of science and ecology, JART expressed serious concerns about the extension with respect to long-term water management requirements, loss of provincially significant wetlands, loss of habitat for a naturally threatened species (the Jefferson Salamander), loss of a portion of a provincially significant Area of Natural Scientific Importance (ANSI) and loss of corridor functions (Johnston 2000). JART’s review was a powerful indictment of the lack of substance and poor technical standards in Dufferin’s impact studies.

Other narratives are tied to and reinforce the environmentalist concerns of JART that value ecological integrity, biodiversity and landscape protection. Common narratives describe the quarry expansion as a ‘rape of a unique habitat’ and a ‘despoiler of a national treasure’, the former invoking a gendered linkage of ‘natural’ and femininity that powers both scientific and environmental discourses (Funston 2002; Smith 2002). One representative of POWER argued that the term ‘continuous natural environment’ means uninterrupted and that a quarry is not a natural environment, and Dufferin’s proposal cannot be accepted because it will bisect the Escarpment Plan Area. She further contended that when considering amendments to the Plan, several objectives of the NEPDA cannot be fulfilled. These involved the protection of unique ecological and historical areas, including an ANSI, the pumping and moving of natural streams and the disappearance of natural scenery (Halsall 2001). The group KEEP focused its critique on Dufferin’s proposal to remove two wetlands and a 2.37-acre forest designated as ANSI/Ecological Significant Area and suggested that a quarry should never be allowed to expand into its buffer zones, especially when it is located in a World Biosphere Reserve. Isings and Guenther (2001, 1) stated: ‘No quarry should ever be allowed to start quarrying into their buffer zones; this is tantamount to moving the goal post. Whenever they want to quarry further, and into an area that is formerly a protection zone they just move the buffer zone further along the escarpment. This totally negates the concept of providing an area of protection’. The president of the Halton/North Peel Naturalist Club echoed these concerns, focusing on the detrimental effects on provincially and regionally rare and uncommon bird species. He further asserted that a biosphere reserve is ‘meant to maintain a balanced relationship between the people living and working within and around the reserve and its natural community and to demonstrate that such a balance is workable’ (Kovaks 2001).

Public participants also noted that consultants’ reports (prepared by MHBC Planning Limited, Golder VME Limited and Ecoplans Limited) were paid for by Dufferin and may, therefore, be biased in its favour (Reid 2001). Thus, they seriously questioned the assumption that science is value free or above political manipulation. Scientists and technical experts are possible sources of information and advice, but their observations cannot be accepted without question; they are open to ‘major doubts and uncertainties’, suggesting that science is ‘politics by other means’ (Irwin 1995, 49, 99). To illustrate, many opponents, especially members of the Halton/North Peel Naturalist Club, brought forth concerns that were either vaguely discussed or completely dismissed in Dufferin’s technical studies. For instance, the naturalists claimed that the loss of the current buffer and the creation of an edge by clear-cutting will reduce the quality if not the actual quantity of adjacent core woodlands. This would in turn change the temperature and humidity of the forest, which allows for the increased abundance of predators in the forest that are not deep forest species (grey squirrels, blue jays and coyotes for instance) (Kovaks 2001). A biologist (2001, 1) with the Halton/North Peel Naturalist Club articulated her concern for certain bird species documented in the Environmental Impact Assessment by Ecoplans. She wrote: ‘The bird survey is, in my opinion, clearly incomplete. Surveys can be tested for their completeness in several ways, none of which were done by Ecoplans…Completeness can also be assessed using Chao’s formula, a calculation of expected species based on numbers of single observations and numbers of double observation. I ran this test and found an expected number of 107 species of breeding birds, ninety-one were found (by Ecoplans). As a more empirical test, I surveyed the road area myself and in just one morning I found two species—Virginia Rail and Rough-winged Swallow—that had not been recorded.
in the five-year survey’. Reid also made several references to the Ontario Breeding Bird Atlas to challenge Ecoplans’ claims that the Red-Shouldered Hawk, Acadian Flycatcher, Hooded Warblers, Prairie Warbler and Louisiana Waterthrush may be widespread in the Halton forest. ‘There is no evidence to support Ecoplans’ claims that these birds may be widespread in the Halton forest, in fact all studies indicate that these species are extremely rare in Halton’ (Reid 2001, 1–2). Reid’s argument is significantly important because she questions the level of confidence of Ecoplans’ efficacy as environmental assessors and the credibility of science in general.

Another significant problem that was identified pertained directly to surface and groundwater quality, which is to be protected by legislation from new mineral extraction. Galin Forsyth (2001), a concerned citizen, pointed to two discrepancies in the hydro-geological report of the proposed recharge wells: (1) the proposed recharge wells have never been used in a limestone quarry; and (2) Dufferin’s water budget was based on an average annual precipitation of 888 mm, though the precipitation at the quarry was only 724 and 691 mm in 1997 and 1998. One would expect the surplus available to fill the lakes to be considerably less than what was estimated. In addition to these arguments, Marion McMeeken (2001) presented documentation that a creek neighbouring another of Dufferin’s quarries had been drained rather than recharged during the droughts of 1998 and 1999. With the recent extremely dry summer, citizens wondered if the same could happen in the proposed extension.

The public submissions from local citizens opposing the extension also expressed a collective concern over the present and future property values of their homes and the ‘peaceful enjoyment of their property’. The latter focused on the effects on the quality of life regarding noise, traffic volume, dust and the quantity and quality of water. One witness referred to the movement of trucks weighing 103 tonnes each, operating twenty-four hours a day providing for continuous and unacceptable levels of noise, traffic and dust. She further referred to blasting two to three times a day that will shake residents’ homes and possibly causing groundwater contamination and water shortages (McMeeken 2001). McMeeken (2001, 2) stated in her submission: ‘The noise from a twenty-four-hour operation and the use of a portable crusher processing 2,000 tonnes per hour operating on a twenty-four-hour schedule plus the conveyor to move crushed product in the North Quarry, as proposed by the applicants, would surely deny local residents “peaceful enjoyment of their property”’. In another submission, it was argued that the operation would create an unhealthy atmosphere for all living beings in a wide area around the proposed quarry extraction area; that bags of calcium to ‘keep the dust down’ are considered to be inadequate. It also pointed to the health problems associated with the ingestion of limestone dust, the presence of silica that may cause the progressive lung disease silicosis and the absence of studies of air quality in the area during truck operations (Dowhan and Dowhan 2001). Dowhan and Dowhan (2001, 2–3) acknowledged that local residents ‘have suffered enough over the last forty years. It is time for the quarry and the Province to find another source of limestone away from the very sensitive Niagara Escarpment and give us the expectation of some possibility of a quiet country life in the foreseeable future’. Another powerful critique employed by local residents was the dangerous precedent that may be set by the Dufferin extension. Referring to the ‘domino effect’ or ‘ripple effect’, speakers argued that if one new quarry license is granted, the prospects of a second and a third are more likely. There is no doubt that other land holders are waiting for a company of Dufferin’s stature to get approval for its quarry extension before submitting their own applications. For instance, it is said that Halton Crushed Stone has about five to ten years of reserves remaining and if the Dufferin application to extend the quarry is granted, it is not obvious why this application to quarry the area would not succeed as well. Any removal of land from the protection of the Plan is thus argued to set a dangerous precedent and putting the integrity of the NEP at risk (Denman 2001). According to Engle and Engle (2001, 1), ‘when Dufferin’s present quarry reserves run out in a relatively short time span of eight to ten years, will the company not be in the same position as it is today, with reserves for only another ten to twelve years, and with the need to replace them, is it not to be expected that an application for further expansion will then be submitted?’

It is interesting to note that at several points during the hearings, Dufferin’s resource manager,
Sarah Lowe, offered to have criticisms addressed privately. This behaviour may not only be a strategic move intended to distract attention away from a proposal’s inadequacies, but it also obviates a better informed public, public assessment and useful recommendations arising out of public exchange, something illustrative of how project proponents can attempt to limit debate and dismiss concerns (Selles 2001). What is significant about these arguments is that when these individuals questioned Dufferin’s claims, they were essentially asking for more than individual or personal accommodations; they were questioning the company’s honesty, its neighbourliness and the authority of expertise itself. This is particularly important because developers are generally seen by governments to bring the gift of economic well being to a region (Richardson et al. 1993). Dufferin’s opponents seriously questioned the benefits of rehabilitation and argued that rehabilitation should not serve as a substitute or reason to continue to undertake extensive resource extraction.

Discourses outside the productivist and post-productivist frame

Clearly, the environmental public hearing process in Canada can allow for the direct and free expression of environmental values by individuals, communities and citizens’ groups. One study, for example, describes the public hearing process as a transparent means of identifying the values in which citizens associate with a specific proposal and a ‘forum in which expert opinion on technical subjects as well as value judgements or the choices of society may intersect and merge’ (Study Group on Environmental Assessment Hearing Procedures 1988, 1, 2, 12). Professional discourses can essentially define how issues are contemplated and reflected on, who may be perceived as sounding legitimate, what may be credibly said and what must remain implicit or unspoken. One outcome can be ‘control over public debate and the harnessing of popular discontents’ (Gismondi and Richardson 1994, 233). In the Dufferin case, the public was faced with such challenges, yet as illustrated, there were many instances where they conducted credible research, pursued scientific advice and ‘spoke in their own voices and successfully questioned the social authority of the dominant discourse while resisting its narrow assumptions and restrictive conventions’ (Gismondi and Richardson 1994, 233).

In constructing a binary of productivists and post-productivists, we recognise that it does not contain the full variety of material interests and discourses in the region. In fact, the binary contains certain assumptions that unite the two protagonists, as well as exclude alternative visions of development on the escarpment. The shared assumptions are well illustrated at the Leading Edge Conference organised bi-annually by the NEC. Here, industrial and conservation forces come together under a common umbrella, focusing on the Niagara Escarpment and biosphere reserve concept as points of departure for debate. The aggregate industry is typically represented, both as participants and as prominent sponsors. Natural scientists, focusing on the monitoring and inventorying of ecological data within the reserve, typically do not address the larger political, economic and social context of the escarpment. The Leading Edge Conference can be considered an ‘arena’; a social and spatial location ‘where actors (such as the NEC, aggregate companies, the APAO, scientists and environmentalists) confront each other, mobilise social relations and deploy discursive and cultural means for the attainment of specific ends, including that of perhaps simply remaining in the game’ (Haan and Long 1997, 6).

Within such a confined context, the problems and solutions to resource conflict and extraction become exceedingly shallow. Dufferin contends that the demand for aggregate gives them no choice but to expand their quarry operation and to continue to supply the resource. The opposition merely focuses on the problems posed by the quarry expansion in situ. This does not, however, question why there is such a great demand for this particular resource in the first place? Nor does it hold Dufferin and other aggregate producers responsible for the huge supply of aggregate and their role in promoting a market for it. The power of science and technology to ‘fix’ problems and the need for job creation to keep the economy going are narratives that act as unquestioned ‘sacred truths’ (Gordon and Suzuki 1990, 1, 4). The term

3 For a similar situation in another biosphere reserve, see Sundberg (1998).
sustainable has also changed from referring to natural yields to development. With that change, Sachs writes, 'the perceptual frame changes—instead of nature, development becomes the object of concern...' (1999, 81). It can be argued, however, that the benefits of the development of a growing urban metropolis may be outweighed by the costs, such as urban sprawl, traffic gridlock, pollution and mental stress. These are points that we made in our own submissions. At one of the hearings, NEC’s Commissioner Marvin Caplan may well have expressed a shared view of his colleagues when he told our presenter privately that although these views ‘may be right, this is not the right place to pick a fight’. He also stated, we presume mockingly but seriously, that he was surprised that we had driven rather than biked to the hearing.

Caplan’s suggestion that we were not in ‘the right place to pick a fight’ is largely unchallenged by the post-productivists. This shows one prominent shortfall of the post-productivist discourse: its failure to address the sustained high levels of aggregate production, its consequences for overall societal health and its implication for aggregate production outside the escarpment. Dufferin is undoubtedly right when it claims that the mere rejection of its proposal will only push aggregate production elsewhere where it may cause similar social and environmental disruptions (Gravel Watch 2004). In failing to address such fundaments, the post-productivist position leaves itself open to charges of various scales of nimbyism (from the local up to the boundaries of the NEP).

The post-productivist position does similarly not challenge the interests of those who suffer disruptions caused by the wider conservation measures within the NEP. These include, for example, those members of the service class who resent the NEC and the restrictions it sets on their ability to ‘improve’ and ‘expand’ their properties (e.g., see Powell 2002). There are many examples of landowners lobbying to be exempt from the NEP and its restrictions of development (Mittelstaedt 1992; Borodczack 1995; Varangu and Nelson 1996; McAndrew 1997). Such advocates of the sanctity of individual property rights do have a strong but diminishing voice in the age of conservationism.

They do not, typically, suffer economic hardship. There are other interests that may suffer material hardships from conservation measures. These include less-well-to-do residents who bear the burden of increased property values and taxes that result from the influx of the prosperous service class. It also includes conventional and organic farmers who resent the Plan because it prevents them from supplementing farm income through other activities (Lynch 2003). Finally, First Nations, whose lands have been appropriated by generations of Euro-Canadian settlers, are virtually absent from the conservation consideration of the NEP. John Borrows, writing about the northern part of the Niagara Escarpment occupied by the Chippewas of the Nawash First Nation, argues that in the provincial planning framework ‘indigenous peoples are often submerged and invisible in their own land because the province does not make provision for representation of their interests’ (Borrows 1997).

Clearly, the very frames and terms of engagement of the Niagara Escarpment conservation regime both empower and acknowledge certain actors and priorities while failing to recognise others.

Conclusion

Decision boards typically pay more attention to experts than to citizens speaking from the heart, but debate over the Dufferin extension is one instance where ordinary people with unusual perseverance managed to bring forth a challenging, persuasive and credible case against development. There are numerous occasions in this case where proponents collectively created powerful narratives that criticised and undermined the environmental, scientific and economic premises of Dufferin’s proposal. This is particularly evident with the active participation at the public hearings, letters of objections and signed petitions. The strong opposition allowed Dufferin’s proposal to be seen in a wider perspective; it slowly began to be perceived as inadequate, contradictory, groundless and simply unattractive.

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4 For copies of these submissions, contact Sandberg.

5 Some of the residents can, however, re-mortgage their properties and in the end sell them at considerable gain. The end result is a more exclusive landscape.
Recent political economy and post-structuralist studies on rural locational conflict provide a greater understanding of how tensions are mediated and resolved in different contexts. The process of rural development is essentially a contest between two sets of actors: one pushing a particular set of production-oriented values whereas the other is what can loosely be described as consumer aspirations concerned with 'quality-of-life issues' and the nation's heritage (Murdoch and Marsden 1994). Here, an anti-development network and discourse have successfully resisted the expansion of aggregate operations in many places (Murdoch and Marsden 1995).

The aggregate planning process in south-central Ontario can be conceptualised as a political struggle between the regional demand for aggregates and local residents' demands for an undisturbed countryside and state bureaucrats' and environmentalists' concern for the preservation of nature and natural processes. The Dufferin case illustrates a process where competing networks and actors attempt to impose their representations on the development and decision-making process. Because there is high demand for aggregates, there is immense pressure on planning authorities to allow aggregates to be quarried. 'Provincial' considerations (such as forecasts of demand) enter into actor networks and 'local' development processes. In this context, political economy forces surrounding minerals extraction will attempt to conduct business as usual as far as possible. The NEC Commissioners' decision to allow Dufferin's application for an extension can be considered as an example of how the politics of development triumphed over the public and the scientific findings at public hearings.

However, local resistance to exploitation may also be powerful, thus placing planning authorities in the difficult position of balancing one set of provincial concerns against others. This case study can in part be seen as a 'local' struggle, but, as illustrated, strategic arguments with the 'natural heritage' take their place alongside the 'local' concerns. Counter-discourses may be strong enough (such as in the critiques of the Dufferin technical reports) to go against the industry. Given the partisan nature of NEC and OMB appointments, it may also be that in an increasingly green environment these institutions will move in the same direction.6

The battle over the Dufferin quarry extension is not over yet. The Commission's decision is currently before a joint consolidated hearing of the OMB and Ontario's Environmental Review Tribunal for which one of us has presented a submission. This time, we insisted that we were in the right place, making the point that the hearing officers not only evaluate the evidence in favour and against the quarry extension per se, but also consider the larger context of a sustained high level of aggregate production and its negative environmental and social consequences. We are hoping for a decision against the extension. If there is a positive recommendation, however, it can be overturned at the Cabinet level. This may happen given that the recently elected Liberal provincial government may not be as wedded to the aggregate network as its predecessor.

Yet, we also note that the productivist and post-productivist discourses may be seen as having many similarities, both of them relating to a spatial model of land utilisation, be it development or conservation. As such, they do not address the broader discourse of aggregate production and consumption beyond the escarpment, nor an internal social topography that promotes a preserved landscape and an ecological aesthetic that is becoming increasingly reserved for the wealthy. These considerations fall outside the frame of the NEP and biosphere reserve. Ultimately, the problems posed by aggregate production on the Niagara

6 Indeed, with regard to the OMB, there are precedents for more favourable decisions towards environmental protection. In Re Township of Mulmer Planning Area Official Plan (1976), 5 O.M.B.R. 317; Mclaughlin v. Town of Caledon (1977), 6 O.M.B.R. 385; and Niagara Escarpment Commission v. Regional Municipality of Halton Land Division Committee (1991), 25 O.M.B.R. 285, the OMB refused to approve applications for development on the ground, inter alia, that they contravened the NEP (Chippman 2002, 183, 238). Also, in Towland-Hewitson Construction Limited and Township West Nissouri (1973), OMB file no. SI438 (unreported), 'the board was unable to reconcile heavy truck traffic on gravel roads with the reasonable amenities of adjacent residents, and recommended against granting a license' (Estrin and Swaigen 1993, 753, 764). There is current evidence that some OMB judges do take environmental protection seriously. In two recent rulings that could affect the rights of landowners across the province, the OMB rejected a developer's plans to construct a golf course on 'a high-quality site for wildlife' and another developer's proposal to subdivide farmland on the environmentally sensitive Oak Ridges Moraine (Danese 2003; Immen 2001).
Escarpment are symptomatic of an economy based on expanding and untrammeled growth and social divisions. If the costs of both production and conservation are to be averted, the solutions will have to strike at the very heart of that economy.

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