



# Public Opinion in Host Olympic Cities: The Case of the 2010 Vancouver Winter Games

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## Abstract

Olympic analyses typically depend heavily on perspectives built from macro processes characteristically rooted in political economy. Using survey data of city residents gathered at six different points in time during the Vancouver 2010 Winter Olympics, this article proposes a focus on what happens within the host city during the Games. While the Olympics were the centre of much debate and controversy before the Games, the data show that attitudes towards the Games became much more favorable thereby providing hard evidence that the Olympics had an experiential urban impact. Regression models revealed that attending free unticketed events and supporting the Liberal party in the last provincial election were the best predictors of positive attitudes towards the Games. It is concluded that the Olympics represent a form of public policy which generates responses related to socio-political factors while also being an interactional event transforming local attitudes towards the Games.

## Keywords

attitude change, host city residents, public opinion, Vancouver Olympics

## Introduction

As the most high-profile genre among mega-events, the Olympics are virtually unassailable as an event of continuous public attention and discussion, because the Games are such an intriguing mixture of sport, politics, and commerce. Global exposure to debates

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and issues prompted by hosting the Olympics has produced a veritable flood of research in a variety of disciplines seeking to explain why the Olympics have become such an influential global force and why cities are willing to compete to host them in spite of the spiraling costs, stirring controversies, and complex challenges in doing so.

The need to explain how and why the Olympics have come to take such a significant position on the world stage has resulted in two major interpretive perspectives among analysts of the Games. The first is more structural in nature in that the Olympics are understood as a transnational organization (the International Olympic Committee: IOC) with links to other transnational organizations and therefore a participant in political globalization (Short, 2008). Most prominent among these organizations are multinational corporations with whom the IOC has become allied, especially through its sponsorship programme (Tomlinson, 2005). The self-preserving character of the IOC as an unelected body and its ability to generate large amounts of cash with little public accountability have created parallels with other international organizations that seek worldwide penetration. Lenskyj (2008), for example, speaks of the Olympics as an industry which can be linked to global capitalism, and Surborg et al. (2008) relate the Olympics to transnational property developers. In these analyses, the international influence of the Olympics is explained as a product of and contributor to global forces of power, control, and domination (Roche, 2000).

The second interpretive perspective focuses more on cities that want to host the Olympics, the leaders that champion the bid, the interests served by hosting the Games, and determining winners and losers in the host city. In the first perspective, the focus is more on the Olympics as part of a global drama of converging forces. In this second perspective, the Olympics are understood as the outcome of more local forces of power and control (Andranovich et al., 2001). The Olympics can be a means of 'signaling' dominant narratives or changes in direction by those in power to internal and/or international populations (Black, 2007). Processes and objectives discussed in the literature include such things as de-industrialization and regeneration, and place marketing and urban entrepreneurialism (Cochrane et al., 1996; Essex and Chalkley, 2004; Gold and Gold, 2008; Macrury and Poynter, 2008) as factors motivating support for the Olympic agenda. Tourism, gentrification, and urban consumerist landscapes are all contrasted with displacement, poverty, and misplaced priorities as a reflection of the struggle between supporters and opponents of the Games (Eisinger, 2000; Lenskyj, 1996; Rutheiser, 1997; Whitson and Macintosh, 1996).

Both perspectives emphasize macro forces underpinning the Olympics. The theoretical insights of political economy are particularly useful in this kind of analysis because economic drivers, especially capitalist forces, and power relations play a key role in decision-making that are reflected in Olympic outcomes.

## The Focus on Host City Residents

What is missing in these analyses is an understanding of the Olympics as an event that is experienced by people in the host city. The Olympics not only reflect urban and global processes but are also an event that is experienced. Local residents have their own perceptions and assumptions about the Olympics which they experience both directly

and indirectly from the bid phase to the post-Games period. Whether aroused by media debates or opposition, attempts to enlist them as volunteers, or being overwhelmed by announcements, plans, and mobilization efforts by Olympic Organizing Committees (OCOGs), residents of the host city cannot ignore the Games, which they encounter in a variety of different ways. The Olympics take place within their own urban spaces and political contexts and local residents develop their own responses to what is occurring and are seldom merely passive observers.

One approach to understanding the response of host city residents is through the theory of the spectacle which implies that host city residents experience the Olympics in similar ways because they are passive recipients of marketed images. Building on the work of Debord, the spectacular images, architecture and theatrical performances of the Olympics are acknowledged to generate awe among spectator residents, and conceal the profit motive and hide the true nature of social relations (Broudehoux, 2007). Harvey (1996: 246) perceived the Olympics as a crafted spectacle that plays a dual role in supporting both social control and capital accumulation. The spectacle theme concludes that the Olympics are a tool of domination which renders local residents powerless. MacAloon (1984, 2006) recognized that the Olympics have become a spectacle par excellence in which sensory and symbolic codes create emotional reactions of enjoyment that minimize controversy and conflict. But he also observed that people often interacted with the Olympics in a way that counteracted elitism. He objected to utilizing the spectacle metaphor as simply manufacturing power and noted that it was what people did outside official Olympic venues as ordinary citizens that provided a different perspective on the Games. In analysing the spectacle of the Mardi Gras in New Orleans, Gotham (2005) made a similar point by showing how spectacles can have the two faces of stimulating consumption and fomenting political indifference, at the same time that they can arouse creative encounters and expressions of autonomy and resistance.

The implication is that host city residents cannot be lumped together simply as homogeneous captives to the Olympic project, but that there is a wide range of responses to the Olympics that reflect personal opinion, tastes, priorities, social position, and worldview. Roche (1992: 581) has noted that mega-events are sociologically complex, with different meanings for different people and he argues that analyses must be based on the micro local level of contextualization. Host city residents can be proponents, opponents, or apathetic to the Games; they can be marginalized, displaced, or willingly seek supporting roles; they can be employers or employees of organizations directly or indirectly related to the Games; they can be volunteers or consumers; they can experience the Games in person, vicariously through the media, or they can participate in Games-related activities (both pro-Games and anti-Games); or they can be part of discourse about the Games or experience its contextual ambiance. These different positions demonstrate that it is difficult to speak of host city residents as of one piece. There are many ways in which residents encounter the Olympics and it should not be surprising that opinions and attitudes about the Games may change over time. In addition, that change is influenced by the opinions of friends and neighbours, so that opinion formation and change are social as well as psychological phenomena (MacKeuen and Brown, 1987).

Why is it that we know so little about how local residents experience the Olympics? In general, it is because the focus of the Olympics is its competitions and ceremonies, which

are driven by external forces. It is the requirements of the IOC, the sports federations and the sponsors, and the need to construct facilities and infrastructure to host foreign athletes, dignitaries, and visitors which put the emphasis on hosting, marketing, and imaging issues. The emphasis is on how host city residents are mobilized to prepare the city for external consumption and non-residents. Such a perspective provides a one-sided view of local residents and minimizes their own voice. Other than attention given to pockets of Games opposition, there has been little consideration of the complexities of these urban voices.

## Measuring Public Opinion

One of the criticisms of the Olympics is that host city residents are seldom consulted, and, when they are consulted, it is viewed as merely to affirm the plans. Elected governments may speak for citizens in one sense but there is often considerable confusion among the electorate about whether the Olympics represent appropriate public policy. When the electorate is consulted through explicit referendums about hosting the Olympics, there is always the risk of rejection such as Denver in 1972 (Foster, 1976) and Berne in 2002. More often than not, elected officials adopt the Olympic project and conduct a survey in the bid phase to convince the IOC of public support. Once the Games are awarded or concluded, there is little political will to ascertain public response because the emphasis is on its successes.

There are scattered references to occasional survey results throughout the Olympic cycle in host western democratic countries (Deccio and Baloglu, 2002; Guala, 2009, Preuss and Solberg, 2006) but scholarly research that systemically measures public attitudes about the Games in the host city has only been reported for three Olympics: Calgary 1988, Atlanta 1996, and Turin 2006. The pioneer work was undertaken by Brent Ritchie and colleagues at the University of Calgary where a research programme called *Olympulse* was established shortly after the city of Calgary was awarded the Games. Five annual surveys of 400 randomly selected residents were carried out before the Games, starting in 1983, and a final survey was completed one month after the Games concluded (Ritchie and Lyons, 1990). For the Atlanta Games, Brian Mihalik (2001, 2003) utilized biannual survey data in the state-wide Georgia Olympic Poll, gathered at 12 time points from 1992 to a post-event poll in 1996. Guala (2009) carried out four annual surveys in the city of Turin beginning in 2002 as well as two post-event surveys (Scamuzzi, 2006). While all of these studies were longitudinal, none of them consisted of panel data.

Each of the research programmes noted above was constrained by local issues and factors that make comparisons difficult. What all of the studies demonstrated, however, is that when questions were asked before and after the Games, reticence was often expressed over concerns about debt, costs or fears of inconvenience before the Games, but, by the post-Games period, there was an overwhelmingly strong belief that the Olympics were both a positive experience and that the Games effectively marketed their city globally. Security issues in Atlanta led to more caution about these conclusions than in Calgary and Turin, but in all three cities residents reacted exceedingly positively to the Olympics in retrospect. While the data are limited and these outcomes may not be representative of all host Olympic cities, these studies provide some statistical confirmation

that corroborates anecdotal evidence that the Games themselves produce a positive evaluation among local residents.

None of the above studies measured shifting attitudes throughout the period of the Games themselves. Data were gathered only annually or biannually. None of the studies reported data that would include explanatory variables such as age, gender, income, voting behavior, or attendance at Olympic venues. Simple percentages were reported with no correlations or attempts at modeling. The door is then open for a much more sophisticated analysis that would shed more light on how local residents encounter the Olympics. Rather than a tourism or marketing perspective which often reflects the interests of the investigators of these studies, there is a need for a more urban perspective whereby the dynamics of local resident interaction with the Games and with each other might be better understood. The objective of this research is to document and explain the trajectory of attitudes toward various aspects of the Olympic Games in the host city of Vancouver. Based on the long history of research on attitude change in social psychology (Banaji and Heiphetz, 2010), our models predicting attitudes toward the Vancouver Olympics include not only a set of demographic variables, but party vote in the last BC election to tap the political affinity of these attitudes, and attendance at Olympic events to incorporate social influence on attitude contagion.

## **The Vancouver Context**

The Olympic Winter Games were held in Vancouver from 12–28 February 2010. As is often the case in western countries, the Olympics project was the topic of much debate and controversy. Part of the problem stems from the fact that local elites usually champion the cause without formal consultation of residents themselves. Groups of economic and political elites take on the project of mounting a bid and attempt to broaden their base of support over time by announcing plans and prognoses of a wide range of benefits in hosting the Games. When political elites adopt the objective of bidding for the Olympics, it becomes a policy objective not unlike other policies which are subject to criticism and debate. Natural opponents to these policies then become those representing non-governing parties. Newspapers usually support the goal of hosting the Olympics given their typical role of local boosterism, but they also see the Olympics as a project replete with debatable issues that can capture and broaden their reading audience. This was certainly the case in Vancouver, as the political party that was in power both municipally and provincially at the beginning of the bid was different from the one in power in the final preparation phase, meaning that multiple parties were implicated in the Olympic project but specific decisions were always open for debate. Some organized groups (e.g. No Games 2010, Olympic Resistance Network) and politicians were opposed to hosting the Games from the outset (Shaw, 2008). Criticisms ranged from anticipated displacement of the poor and a sense of misplaced priorities given other more pressing government expenditures to aboriginal concerns, opposition to construction projects such as the over-budget Convention Centre to house the media, and reaction to the heavy hand of the organizing committee (VANOC).

The desire for public endorsement of the Olympic project had resulted in a city-wide plebiscite in 2002 just prior to the IOC decision. The campaign itself created clear battle

lines which extended past the referendum into the Games preparation period and ensured that the Olympics were viewed as controversial. Forty-six percent of eligible voters turned out to respond to the question ‘Do you support or do you oppose the City of Vancouver’s participation in the 2010 Winter Olympic and Paralympic Games?’ While 64 percent voted to support this proposition, more than one-third (36%) of voters rejected it. Thus, while the plebiscite passed with a clear majority, the campaign helped to catalyze opposition which continued to monitor and oppose aspects of the Olympic agenda throughout the preparation period. As late as one month prior to the Olympics, an Angus Reid poll had shown that while almost 80 percent of all Canadians thought that the Games would have a mostly positive effect on Vancouver, only just over 50 percent of British Columbians agreed with that assessment (Angus Reid Public Opinion Press Release, 21 January 2010). In fact, 35 percent thought that the impact would be mostly negative. The implication is that there was substantial unease in the city about the Olympics and indications were that demonstrable opposition during the Games themselves might occur. Survey data collected throughout the period of the Games then could be useful in tracing the nature and evolution of public opinion.

## Methodology

### *Data*

A series of surveys were conducted by Angus Reid Public Opinion in the Vancouver metropolitan area just before, during, and just after the Vancouver Winter Olympics. Angus Reid maintains an on-line panel of some 100,000 Canadians with 8000 in the Vancouver metropolitan area (what is known as the Lower Mainland) and has an established procedure for response targets by comparing their database to census results in terms of age, gender, and region. The sample also takes into consideration the fact that response rates differ for different groups of people by means of person weights. The response rate from the panel reported by the firm is in the range of 40–50 percent. All waves of the survey also reported clustering of cases by postal codes. In all analyses we adjusted for both the person weights and clustering in the data.

Data were collected in six waves beginning just prior to the start of the Olympics, at roughly the middle of the first week, the end of the first week, the middle of the second week, the end of the second week, and three days after the Olympics concluded. The sample size of each survey consisted of approximately 500 residents of the Vancouver metropolitan area to yield a total sample size of 2929. The result is a longitudinal study but not a panel study, since each sample was independent of the others.

### *Measures*

The attitude variables were tracked over time and, in several cases, serve as dependent variables in the models described below. The specific questions are shown in Figure 1 as titles on the graphs, with responses serving as labels attached to individual curves. Items measuring how closely Vancouverites followed the Games and their level of excitement and inconvenience were deemed as of less interest and quality for our purposes than the

others; hence they are not modeled with explanatory variables. 'Impact on Vancouver', attitude toward anti-Olympic protests, and whether the Olympics were 'worth it' are single item indicators. Based on a sequence of items in the survey questionnaires tapping 'feelings' about the Olympics, Canadian athletes, and VANOC, three scales were constructed summarizing the items. The item read, 'Here are some feelings that you may have about the Vancouver Winter Olympics/Canadian athletes/VANOC. Please select up to four', with options: proud to be Canadian; shame; joy; sadness; trust; disgust; fear; anger; enthusiasm; and indifference. Since these were binary items, coded 1 if selected and 0 if not, a principal components analysis was utilized based on a matrix of tetrachoric correlations suitable for binary variables. For both sets of items, a single factor solution fit well with most component loadings above 0.7, although for feelings about the Vancouver Winter Olympics and Canadian athletes, 'fear' was discarded because of a low component loading, and 'indifference' was discarded in feelings about VANOC. Scale scores were constructed by simply summing the indicator variables for the items in the two domains producing a count variable.<sup>1</sup>

While the graphs in Figure 1 tell a story of attitude change over time, given the relatively small samples in each wave, inferential methods must be used to determine the significance of the trends observed there. In addition, there must be certainty that the trends are not the result of the operation of other variables that characterize respondents. Therefore, the key independent variable in our models is time, measured by number of days elapsed since the first survey on 11 February 2010. We chose to use number of days, because the surveys were not evenly spaced, and it provides a continuous measure of time reflecting the degree to which attitudes were changing as the Games progressed.

The additional explanatory variables included were age, gender, education, household income, plans to attend either free or paid Olympic events, and voting behavior in the 2009 British Columbia provincial election. Age is measured continuously as years of age. Gender is an indicator (dummy) variable coded 1 for males, 0 for females, the reference category. Education is captured by two indicator variables, one coded 1 for respondents with some post-secondary education, 0 otherwise; the other coded 1 for those with at least a bachelor's degree, 0 otherwise. The reference category is a high school diploma or less. Household income is measured also using two indicator variables, one coded 1 for those earning between \$50,000 and \$99,999, 0 otherwise, and a second coded 1 for those earning \$100,000 or more, 0 otherwise. The reference category is \$49,999 or less. In each of the six waves, respondents were asked about their plans to attend Olympic or Olympic-related events, including Olympic sporting events, Cultural Olympiad events, free concerts and nightly entertainment events, Olympic victory ceremonies, and Olympic 'houses' and pavilions set up by participating countries and sponsors. Possible responses were: yes, more than once; yes, just once; no; and not sure. These activities were divided into ticketed (paid) events (competitions, culture and victory ceremonies) and unticketed (free) events (concerts, entertainment, pavilions) which created two indicator variables. One was coded 1 for those who said they would attend at least one paid event, 0 otherwise, while the second was coded 1 for those who said they would attend at least one free event, 0 otherwise. Finally, a measure of vote in the 2009 BC provincial election was included. Since the Liberals had supported the Olympic bid and had been returned to power, we chose to use a single indicator variable coded 1 if a respondent

voted Liberal, 0 if for other parties or not at all. We compared tabulations of most of these variables to 2006 census data for the Vancouver metropolitan area and 2009 election results, and, with the exception of education, the survey results are quite close to comparable census and election figures.

## Models

Since our key attitudinal dependent variables were measured at different levels, ordinal for attitudes toward protests, nominal and binary for 'impact' and 'was it worth it', and counts of items for the 'feelings' scales, we use model estimation methods appropriate for each: ordinal logistic regression for the ordinal dependent variable, binary logistic regression for the binary dependent variables, and Poisson regression for the count scales. To make the results across these estimation methods comparable, all effects are reported as exponentiated coefficients, generally known as odds ratios. Details on these methods are widely available in the literature (e.g. Long, 1997). In all cases, listwise deletion of missing cases was applied. The interpretation of the odds ratios differs somewhat across the estimation methods. In binary logistic regression, the odds ratios express the factor change in the odds of scoring 1 on the dependent variable for a one-unit change in an independent variable. In ordinal logistic regression, they can be interpreted as a factor change in the odds of a lower compared to an adjacent higher outcome for a one-unit change in an independent variable. In the case of Poisson regression, they are interpreted as the factor change in the expected count for a one-unit change in an independent variable. In all cases, the effects control for all other independent variables in the model.

All the models used here incorporate a linear specification for time. In other words, we assume that change over time in each of the dependent variables will conform best to a constant increase or decrease. Although not reported here, we concluded this based on comparing the linear-effects model to one in which the shape of the effect of time was unconstrained, achieved by representing time with a set of indicator variables, one for each survey but one, the reference survey. Likelihood-ratio tests for the difference between these specifications (Long and Freese, 2006) favored the linear specification in all cases. A second specification issue is whether or not the time trends in the attitude variables differ across values of the other independent variables in the models. We tested this by comparing models containing main effects only to models that also included all possible interactions with time. Again, in all cases likelihood-ratio tests and a comparison of BIC (Bayesian Information Criterion) statistics confirmed that the models with main effects only are to be preferred (Raftery, 1995). In other words, time trends in attitudes do not vary by age, education, or any of the other explanatory variables in the models.

We report two sets of models below. This is because what turned out to be a key predictor of attitudes, party vote in the last provincial election, was not asked in wave 1. This gave us the choice of either sacrificing data from the first wave, or including a separate set of models for the waves that did include a measure of party vote. We chose the latter.



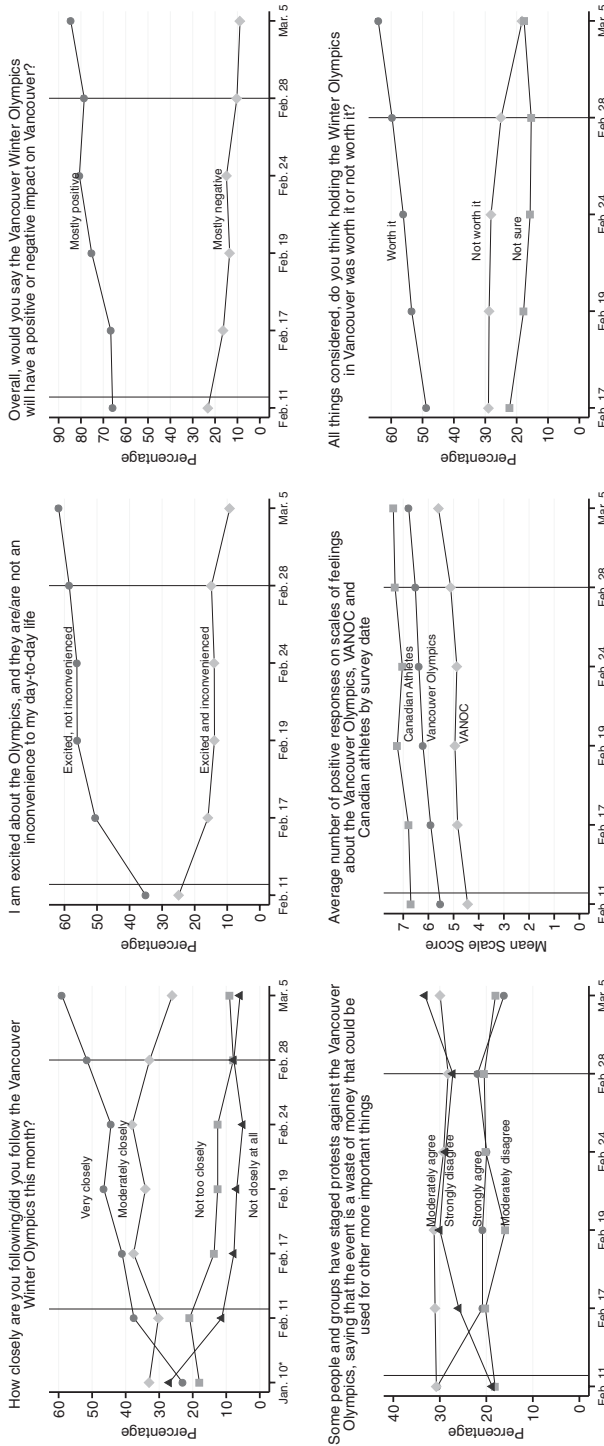
## Results

Figure 1 reports unadjusted trends from all waves of the survey, tapping attitudes towards the Olympics. Some province-wide data were collected one month prior to the Games that can occasionally serve as a baseline, though they include respondents beyond the Vancouver metropolitan area. Based on the item asking, 'How closely will/are/did you follow the Vancouver Winter Olympics?', it is clear that interest increased as the Olympics progressed from a low of 23 percent to a high of 59 percent who followed the Games 'very closely'. Throughout the Games period, the percentage that watched the Games either 'very closely' or 'moderately closely' reached 85 percent of metropolitan area residents. It is apparent from the first panel of Figure 1 that the Olympics clearly captivated city residents as even those who had 'not planned' to watch the Games 'closely' and especially 'not closely at all' dropped off considerably. The item asking about excitement vs. inconvenience is somewhat complicated by raising two ideas, but it also suggests a dramatic change in views toward the Games: those who said they were 'excited and not inconvenienced' rose from 35 percent to over 60 percent over the duration of the event while the number of 'excited and inconvenienced' dropped off to less than 10 percent.

Consistent with these attitudes, perceptions of the impact of the Games on Vancouver were considered mostly positive by some 66 percent of respondents just before the opening ceremonies, and increased to 84 percent over the course of the event. The item labeled 'protests' (also combining two ideas – approval of the protests and the issue of 'wasting money') demonstrates a strong shift downward from 31 percent who strongly agreed with the protests and the idea that the Olympics were a waste of money to 17 percent after the Games were over, and a strong shift upward of those who strongly disagreed from 19 percent to 33 percent. The moderate positions on both agree and disagree remained rather stable. While those who strongly disagreed replaced those who strongly agreed in their strength of response, it is clear that there was considerable variation among urban residents in their attitudes towards protests and costs. The sudden drop in those who agreed was probably also related to negative responses to the protests that led to violence on the second day of the Olympics.

Results based on the feeling scales toward both the Vancouver Olympics, Canadian athletes, and VANOC also show that the level of positive feeling toward both increased from the first to the last survey waves. Nevertheless, positive feelings toward the Vancouver Games were consistently higher than those expressed toward the organizing committee, while positive feelings toward the athletes were consistently the highest. Indeed, the VANOC scores, ranging from 4.4 to 5.6, were near the midpoint of the 9-point range of the scale, indicating less positive attitudes towards the organizing committee, although that sentiment moderated somewhat during the course of the Games.

By the middle of the first week, almost half of respondents thought that hosting the Games in Vancouver was already worth it and this response continued to increase to 64 percent. About 30 percent initially thought it was not worth it and this number more or less held steady though ultimately declined to 18 percent. Those who were skeptical or 'unsure' hovered around 20 percent. It can be assumed that the 'worth it' item touched on financial sensitivities which may be contentious. However, when residents were asked



**Figure 1.** Trends in attitudes toward the Vancouver Winter Olympics, January-March, 2010  
 Note: \*10 January item was phrased: How interested are you in the Vancouver Winter Olympics? and asked of a BC sample. Vertical lines indicate the Olympic period.

after the Games whether the Olympics were a success or failure, 82 percent agreed that the Vancouver Games had been a success, while only 5.5 percent said they were a failure. In sum, the evidence is clear that the Olympics generated considerable positive support as the Games progressed. Whether it was worth it or not is another issue, but even here the sense that it was worth it increased as the Games progressed.

Table 1 reports results from the models predicting attitudes about the Vancouver Winter Olympics. These models have two goals: to confirm that the trends observed in Figure 1 are in fact statistically significant, and to determine the effects of a set of social and economic measures on responses. We chose not to model two of the attitude variables whose trends are shown in Table 1: the item asking how closely respondents are following the Games, because we did not have access to the 10 January micro data which form the baseline for the trend, and the item regarding excitement and inconvenience, because it conflates two distinct concepts.

The odds ratios associated with 'days elapsed since first survey' (henceforth referred to as 'time') test the null hypothesis of no trend. In the first panel, a significant positive or negative (in the case of the protest item) linear time trend is evident. The coefficients are small, because the unit here is the day. Clearly, the strongest trends are associated with the 'impact' and 'worth it' items. Translated into weeks, positive responses to the 'impact' item multiplied at a rate of 1.36, meaning that positive responses increased by a factor of about one-third each week. As indicated above, we have no evidence that these trends vary across values of any of the other variables in the models, since all interactions with time were non-significant. The results in the lower panel using waves 2–6 are similar with one exception: once Liberal vote is controlled, the negative linear trend of attitudes toward protests becomes non-significant. This is a consequence of a pattern of strong disagreement with the protest/waste-of-money theme among Liberal voters that is consistent over time. Based on these results, it is clear that attitudes toward the Vancouver Winter Olympics among Vancouver residents became increasingly positive as the Games progressed, with the sole exception of agreement with the protests, which trended downward over time.

As for the other explanatory variables, by far the strongest effects are found for variables measuring plans to participate in Olympic events, whether paid or free, and, in the case of data for waves 2–6, having voted for the Liberals in the last election. Indeed, Liberal voters were over three times more likely to say that the Olympics had a 'positive impact' on Vancouver, four and a half times more likely to say that the Olympic effort was 'worth it', and only one-fourth as likely to agree with the protests. The importance of the Liberal vote variable is underscored by the enormous increases observed in the pseudo- $R^2$  values when they are added in the model; in all cases the model fit improves considerably. Of the two 'plans' variables, planning to attend free events consistently had stronger effects than plans to attend paid events. For example, those planning to attend or who actually attended a free event were nearly three and a half times more likely to perceive the impact of the Olympics on Vancouver to be positive, 3.9 times as likely to believe that hosting the Olympics was 'worth it', and only 40 percent as likely to agree with the protests. As for the 'feeling' scales, the expected score on the Olympics scale is 20 percent higher, while for the VANOC scale it is 18 percent higher among those planning to attend free events.

**Table 1.** Effects of time (days elapsed) and explanatory variables on attitudes toward the Vancouver Winter Olympics and VANOC, February–March 2010

Explanatory variables	Dependent variables				
	Feelings about Olympics <sup>a</sup>	Feelings about VANOC <sup>b</sup>	Impact on Vancouver <sup>c</sup>	Attitude to protests <sup>d</sup>	Was it 'worth it'? <sup>e</sup>
<b>Models using waves 1–6</b>					
Days elapsed since first survey	1.009***	1.009***	1.052***	0.972***	1.035**
Age	1.001*	1.005***	1.015**	0.985***	1.001
Gender (Male = 1)	1.016	0.960	1.058	0.736**	0.994
Some post-secondary	0.961*	0.925***	0.744	1.084	0.749
Bachelor's degree or more	0.945*	0.920**	0.653*	1.026	0.962
Income \$50–100K	1.051*	1.021	1.329	0.766*	1.406
Income \$100K or more	1.079**	1.098**	2.108***	0.515***	1.530*
Plan to attend free events	1.214***	1.184***	3.415***	0.402***	3.919***
Plan to attend paid events	1.122***	1.192***	1.915***	0.564***	2.912***
Observations	2556	2556	2556	2511	1779
Pseudo-R <sup>2</sup>	0.155	0.161	0.124	0.058	0.167
<b>Models using waves 2–6</b>					
Days elapsed since first survey	1.008***	1.009***	1.057***	0.983	1.036*
Age	1.000	1.005***	1.009	0.990**	0.995
Gender (Male = 1)	0.999	0.939**	0.972	0.823	0.896
Some post-secondary	0.974	0.937*	0.818	1.05	0.779
Bachelor's degree or more	0.946*	0.929*	0.717	1.022	0.92
Income \$50–100K	1.053**	1.021	1.274	0.83	1.257
Income \$100K or more	1.064**	1.078**	1.805**	0.619***	1.228
Plan to attend free events	1.178***	1.165***	3.125***	0.425***	4.088***
Plan to attend paid events	1.091***	1.144***	1.575**	0.691***	2.458***
Voted Liberal	1.155***	1.208***	3.137***	0.268***	4.503***
Observations	2151	2151	2151	2111	1779
Pseudo-R <sup>2</sup>	0.300	0.300	0.142	0.092	0.225

Notes: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

<sup>a</sup>Estimates from a Poisson regression with score on a scale of feelings about the Vancouver Olympics as dependent variable

<sup>b</sup>Estimates from a Poisson regression with score on a scale of feelings about the VANOC as dependent variable

<sup>c</sup>Estimates from a binary logistic regression with 'positive impact on Vancouver' vs. 'negative impact' as dependent variable

<sup>d</sup>Estimates from an ordinal logistic regression with a scale of agreement with protests as dependent variable

<sup>e</sup>Estimates from a binary logistic regression with 'holding the Winter Olympics in Vancouver was worth it' vs. 'not worth it' as dependent variable. Despite appearing in both panels, this item was not asked in wave 1

Although the demographic variables exhibit some significant effects on attitudes, these effects are not nearly as strong as those for the 'plans' and party vote variables. Using all waves of data, the only strong effect of gender is on attitude toward protests: males are about 26 percent less likely to agree with the protesters, though this effect disappears when party vote is controlled. Age has significant effects on all attitude measures except

'worth it'. Older persons have more positive feelings about both the Olympics and VANOC, feel that the impact on the city was positive, and tend to disagree more with the protesters. Nevertheless, two of these four effects become non-significant after controlling for party vote, suggesting that Liberal voters tend to be older. Education affects only the 'feeling' scale scores, with those having some post-secondary education or a degree having less positive feelings toward both the Olympics and VANOC than those with a high school diploma or less. The strongest effects among the demographic variables are found for household income. Those in the highest income category have higher scores on both feeling scales, are more than twice as likely to see the impact of the Games as positive, half as likely to agree with the protests, and 50 percent more likely to view hosting the Games as 'worth it'. However, these effects decline in strength with the addition of a control for party vote, since Liberal voters tend to be in the higher income categories.

## Discussion and Conclusions

The Olympic Games are a highly mediated event in which broadcasters and journalists convey images and interpretations that shape public opinion. The role which this discourse plays needs to be moderated by host residents' own experiences with the Games. For example, volunteers and torchbearers, as two special categories of citizen participation, each far outnumber athletes and media – the two groups around which much of Olympic preparation is based. This does not include all the other ways in which citizens can be involved in the Olympics but it does suggest that local residents need to be understood as part of the Olympics and that how they encounter the Olympics needs to be part of an Olympic analysis. In fact, host city residents have the opportunity to experience the Olympics first-hand rather than exclusively as a mediated experience (Rowe and Stevenson, 2006: 198).

The evidence presented here demonstrates that a significant shift in public opinion occurred in Vancouver through the course of the Games and that the Olympics captivated public interest as well as generating more favorable attitudes towards hosting the Games. The major issues of cost, value and protest did not disappear but they were considerably attenuated through the period of the Olympics. Assessments of the positive impact of the Games on Vancouver and whether it was worth it or not show the most consistent upward trend over time. Support for VANOC (the local organizing committee) was not nearly as strong as support for the Olympics and the athletes in general, suggesting that planning decisions were often viewed as intimidating by local residents.

Demographic explanatory variables for these findings are only statistically significant in a few instances. Age, gender, and education have limited utility although income has some explanatory power with those with higher incomes being more favorably predisposed to the Games. However, the two most powerful explanatory variables are voting behavior and actual participation in Games-related activities. Having voted for the party in power, the Liberal party, in the last provincial election was a very strong predictor of positive attitudes towards the Olympics. The Liberal party in British Columbia attempted to carve out a more centrist position but the absence of a credible party on the right and, in contrast, the existence of at least one strong party on the left, meant that opposition or reticence came from persons with predilections to support parties on the left. Voting

behavior, then becomes an important factor in understanding attitudes towards the Olympics among citizens. But of equal importance are the participation variables. By the time the Olympics were over about 24 percent of respondents had attended ticketed events (sporting competitions and/or Cultural Olympiad), but many more had attended non-ticketed events (38.5% free entertainment, 43.8% pavilions). Attending non-ticketed events was especially linked to a positive attitude to the Games.

In comparing the Vancouver data with the Calgary data in the Olympulse study, it is clear that the Olympics were more contentious in Vancouver. Resident support for Calgary hosting the Games averaged 85 percent over the five-year preparation period and 83.3 percent concluded that the benefits outweighed the costs (Ritchie and Lyons, 1990). Where Vancouver differed from Calgary was in the swing in public opinion through the duration of the Games, which provides evidence of how the Games and its atmosphere can impact public opinion. These results can be compared with the Georgia poll where public support for the Atlanta Games declined just prior to the event but bounced back to 94 percent in the post-Games survey (Mihalik, 2001). Both Calgary and Turin (Guala, 2009) demonstrated extraordinary support for the Games that was more or less sustained from the beginning, and, in both places, an unusual atmosphere of public participation in free events or street activity parallels that which occurred in Vancouver (Hiller, 1990).

The conclusions we have outlined convincingly document changes that took place in attitudes toward the Olympics in Vancouver over the course of the event and factors that explain those attitudes. What requires further discussion is why this shift took place given that our results indicate that the trends did not vary across values of the explanatory variables. While any answer would require attention to a complex set of factors, it appears that the primary focus would have to be on how and why citizens became actively and emotionally involved in the Games in ways far beyond having tickets to Olympic competitions. The active street life, often identified by citizens as well as commentators and quite untypical of normal urban behavior in Vancouver, provides important clues which require careful analysis.

The data presented here illustrate two important sociological points. First, the link between support of the governing Liberal party and support of the Olympics demonstrates that the Games must be viewed as a public policy initiative for which opposition is a natural response for those who advocate other policy options or who hold different political affiliations. In other words, rather than having an expected universal appeal, the Olympics can be caught in local political debates that reflect criticisms and differences in policy priorities, party ideology, and leadership preferences which result in public conflict, opposition, or suspicion about the Games. The Olympics then must be viewed as a political act with political consequences. Second, in spite of these conflicts, and somewhat surprisingly, public opinion can change as the result of the event itself. Rapid shifts of opinion are usually associated with catastrophes such as 9/11 (Skocpol, 2002) or assassinations (Esaïsson and Granberg, 1996) where the element of shock is present. In the case of the Olympics in Vancouver, it is a joyous mood that emerges as the result of citizen participation that leads to increased support for the Games. Thus while the Olympics as a policy initiative generates interactive responses from host city residents,

so also do residents interact sociologically with the Games themselves resulting in different attitudinal outcomes.

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## Note

- 1 To conserve space, tables reporting the results for the construction of these scales, comparing the Angus Reid survey results to Canadian census data for the Vancouver metropolitan area, and the alternative models described below may be found on the second author's website at: [http://people.ucalgary.ca/~wanner/vanoly\\_appendix\\_tables.pdf](http://people.ucalgary.ca/~wanner/vanoly_appendix_tables.pdf)

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