

STRUCTURAL DIMENSIONS IN THE GEOGRAPHY OF LOCATIONAL CONFLICTS

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LOCATIONAL CONFLICT is a frequent by-product of efforts to change the physical structure of man-made environments. Within the geography discipline, theoretical and empirical interests in the conflict basis of public and private decisions on the use of land were stimulated in the early 1970s by the work of Julian Wolpert and his associates.¹ The resolution of conflicts over the locations of specific activities is seen as an important means of allocating benefits among locations² and has led to considerable variations in the distribution of necessary services and amenities among residents of the city.³ Indeed, irrespective of overt evidences of conflict occurrence, David Harvey has characterized the land-use pattern itself as an important indicator of the socio-political rules which direct urban development.⁴

Although the conceptualization of locational-conflict research has drawn broadly from economics and other social sciences, the empirical work in this area has been more narrowly conceived, focusing on individual conflict issues and emphasizing their unique sets of participants, arguments, and environmental circumstances. Michael Dear has called attention to the difficulties imposed by this case-by-case approach on efforts to account for the system-wide impacts of specific land-use decisions.⁵ But, in addition, this approach has not permitted a rigorous characterization of the geographic pattern of conflicts within urban regions. For this purpose, there is need for a consistent set of data to identify the full range of conflicts associated with a city's development over given time periods. Ideally, such a data base should be readily available for cities of different sizes and cultural settings so that general conceptualizations of conflict patterns can be hypothesized and tested.

Evidence on land-use changes might provide the basis for such analysis. But, land-use changes per se need not necessarily lead to locational conflicts. Nonetheless, areas having high levels of land-use transition may be expected to generate more overt public debates over land-use issues than areas of comparative stability. Although no specific identity of locational conflicts was attempted, Bourne's⁶ analysis of the aggregate of changes for 27 land-use activities within metropolitan Toronto offers an important contextual framework for understanding an urban area's conflict pattern. Using a principal components procedure, he defined a typology of the most significant components of change from 1963 to 1971. This consisted of (1) suburbanization, (2) the renewal of the urban core and fringe, (3) public park expansion and the growth of service networks (utilities and roads), and (4) the growth and decline of nucleated specialized activities (e.g., the removal of industrial uses from the inner-city and the spread of institutional, recreational, and high-rise residential uses to the suburbs). The research described in this paper results in conclusions which parallel those of Bourne; however, it differs with respect to specific objectives, the sources of data, and the procedures of analysis.

OBJECTIVES

Instead of considering all land-use changes within the city, this research focuses only on that subset of actual or proposed changes which result in identifiable conflicts. The setting is a city much smaller than Toronto (London, Canada) but in a very similar social and political milieu. The data base, derived from a content analysis of the city's local newspaper, is structured so as to reveal the principal participants and issues associated with each conflict occurring within a four-year period from 1970 through 1973. Allowing for possible political or social bias by the newspaper, it is contended that news items concerning land-use conflicts can be systematically analysed for purposes of: (a) itemizing and describing the types of proposed land-use change which provoke conflicts; (b) assessing the degrees of involvement of various groups as either proposers of or as objectors to such changes; and (c) identifying the principal land-use and participant groupings which make up the basic dimensions of an urban area's conflict structure.

These three objectives have guided the empirical analysis which follows. It is intended that the approach adopted will provide a more system-wide orientation to locational conflict studies. Unlike most of the research in this area, this study does not consider the specifics of those decision-making processes which lead either to the initiation or to the resolution of the conflict issues. Hence, all inferences concerning the behavioural motivations of conflict participants are to be regarded with caution. Finally, although this case study describes the conflict pattern for only one city, it is suggested that the methodology adopted may allow for comparisons among cities.

IDENTIFYING AND CLASSIFYING LOCATIONAL CONFLICTS

In this study, locational conflicts are operationally defined as issues which meet all of the following criteria: (a) there has to be an involvement of two or more parties who consider themselves to be in opposition with one another;⁷ (b) the arguments advanced by the participants must express concerns over existing and proposed activities at particular locations; and (c) the issue must have an address which is mappable as a point, line, or area pattern.

In addition to these criteria, only issues involving the area within the city's political boundaries were included. Because of the comparatively minor spillover in metropolitan development beyond London's limits, this constraint eliminated only three significant locational conflicts: a proposal to develop a large land-fill site south of the city, the location of an inter-urban freeway, and provincial interest in establishing governmental units at the regional level.⁸

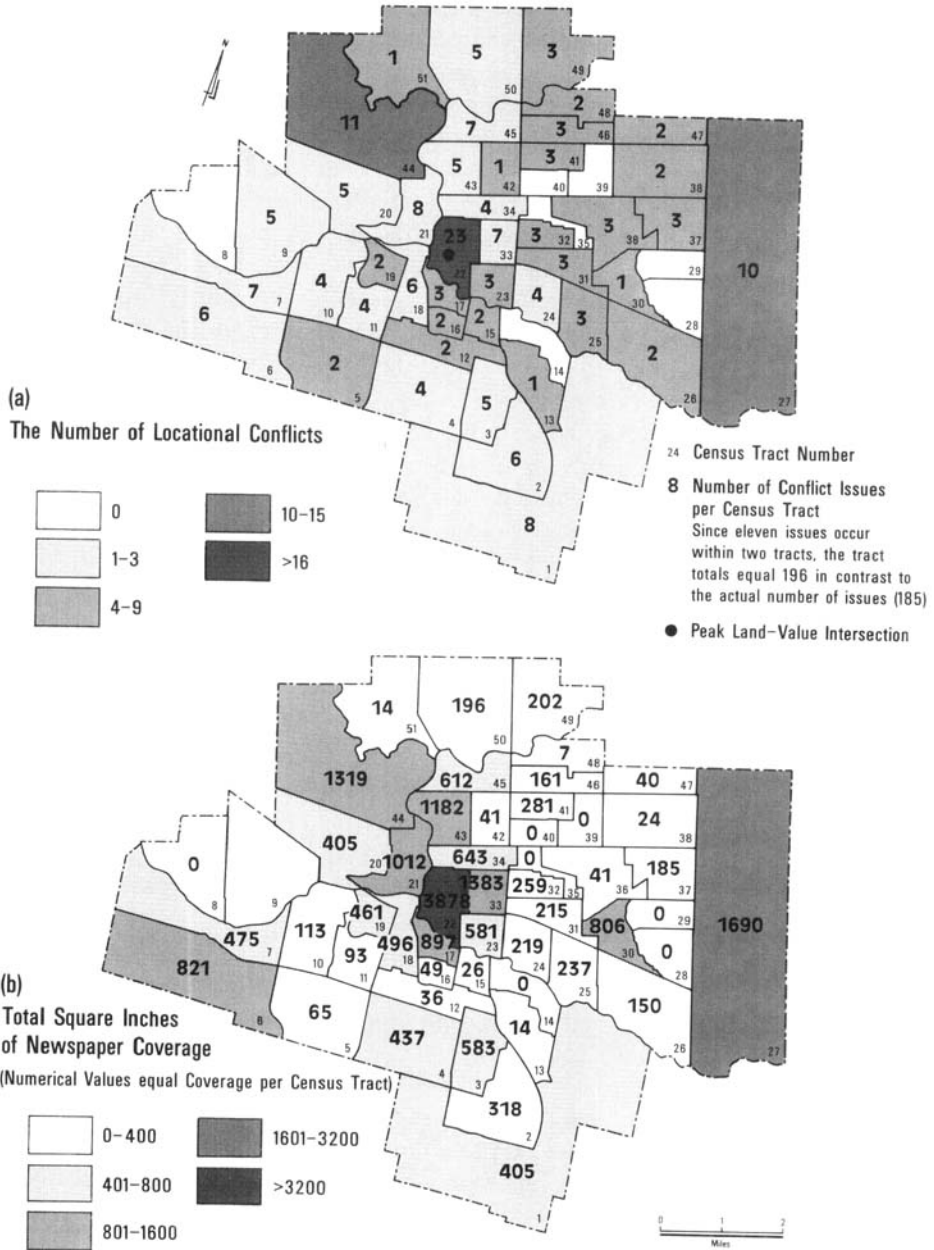
Based on day-by-day reviews of the evening edition of the local *London Free Press*,⁹ from 1 January 1970 through 31 December 1973, a total of 185 issues met the above criteria. Since London has a population of almost one-quarter million people, it is expected that these conflicts exhibit nearly the full range of land-use issues likely to occur in an urban environment and involve a full spectrum of participants from individual citizens to large private developers and policy-making bodies.

In Figure 1 the conflicts have been mapped according to the total number of issues and to the extent of news coverage per census tract for a four-year period.¹⁰ The resulting maps of the macro-pattern show a distinct concentration of conflicts within the city's core area and a secondary concentration in the peripheral census tracts. In general, this pattern reflects the concerns associated with the renewal of land uses in and near the core, suburban residential expansion, and the related needs to augment the infrastructure of public service activities and facilities. This distribution conforms with the results of a previous mapping of London's conflicts by Janelle and Millward.¹¹ Although this previous research described the locational pattern associated with each of nine categories of issues, the categories used neither expressed the exact nature of the land-use changes being considered nor identified who was involved in the conflicts. In contrast, this research defines each issue in terms of what Rapoport regards as two of the most basic elements of all conflicts – namely, their participants and their issues.¹²

Each locational conflict may be seen to consist of a *proposer* and an *objector* to change relative to an *issue* involving an *existing land use* and a *proposed land use*. The matrices of Tables I and II itemize the distribution of London's 185 conflict issues in terms of more detailed breakdowns of the participant and land-use combinations. Thus, for example, if neighbouring households objected to a proposal by a city alderman to extend a street through an existing parkland, the resulting issue would be categorized both as a policy maker (proposer)–individual consumer (objector) and as a recreation (existing land use)–transportation (proposed land use) conflict.¹³ In addition to locating it in the appropriate census tract(s), the total square inches of news coverage concerning this issue during the four-year period would be recorded. These classificatory and measurement procedures are intended to provide a set of consistent quantitative indicators useful for identifying the broad range of locational issues confronting an urban area and for exploring the structural dimensions underlying its conflict pattern. To illustrate this utility, London's conflict distribution is described according to its participant and land-use features.

Participants in Locational Conflict

Each element of the classificatory matrices may be thought of as a separate variable describing something about either the land-use or the participant structures of London's locational conflicts. However, for the participation matrix (Table I), only 20 of the 36 categories were represented and only eight groupings included ten or more issues. Noteworthy in this distribution are the dominant positions of policy makers and developers as the principal proposers of change; together, they accounted for more than 64 per cent of all proposals. However, even more pronounced is the role of individual consumers (including territorially defined community associations and special-interests groups such as the Urban League)¹⁴ as objectors to change in over 63 per cent of the 185 issues – mostly against proposals advanced by developers and policy makers. The diagonal entries of this matrix refer to within-group conflicts, strongest among public-sector participants. This is not surprising since these people were elected or appointed for the precise purpose of debating and resolving issues concerning public policy. Policy makers are expected to take initiatives, both in changing urban infrastructure and in protecting their constituencies from unde-



Source: Data gathered and calculated by author from the London Free Press.

FIGURE 1. Locational conflicts and newspaper coverage, London, Canada, 1970-73.

TABLE I

DISTRIBUTION OF CONFLICT ISSUES ACCORDING TO CONFLICT PARTICIPANTS FOR LONDON, ONTARIO (1970-73)

Proposers of change	Objectors to change						Proposer totals
	Ind. cons.	Corp. cons.	Develop.	Planners	Policy makers	Institut.	
Individual consumers	0.062		0.008		0.076		0.146
Corporate consumers	0.076	0.005		0.011	0.059		0.151
Developers	0.197	0.005	0.008	0.005	0.070		0.285
Planners	0.027				0.005		0.032
Policy makers	0.249	0.022			0.081	0.005	0.357
Institutions	0.022					0.005	0.027
Objector totals	0.633	0.032	0.016	0.016	0.291	0.010	1.0

SOURCE: Data gathered and calculated by author from the *London Free Press*. See text for details.

NOTES: The term *consumers* refers to the users of the land-use environment. Individual consumers include households, individual citizens, and their groupings into community and special-interest associations. Corporate consumers include those retail, industrial, and service establishments seeking economic returns on their investments. Policy makers include elected and appointed public officials at municipal, county, and provincial levels in addition to adjudicatory bodies such as the courts and the Ontario Municipal Board. Values represent proportions of 185 issues.

TABLE II

DISTRIBUTION OF CONFLICT ISSUES ACCORDING TO LAND USES INVOLVED, LONDON, ONTARIO (1970-73)

Existing land uses	Proposed land uses								Existing use totals
	1	2	3	4	5	6	7	8	
1. Low-density residential	0.043	0.041	0.022		0.032	0.014			0.152
2. High-density residential		0.014							0.014
3. Retail-commercial		0.005	0.054	0.005	0.011	0.005			0.080
4. Manufacturing			0.011	0.038	0.005		0.005		0.059
5. Transport facilities			0.022		0.123				0.145
6. Institutional			0.008		0.005	0.078	0.011	0.011	0.113
7. Recreational	0.011	0.011	0.011	0.016	0.011	0.005	0.016		0.081
8. Open space	0.073	0.084	0.035	0.022	0.032	0.049	0.046	0.016	0.357
Proposed-use totals	0.127	0.155	0.163	0.081	0.219	0.151	0.078	0.027	1.0

SOURCE: Data gathered and calculated by author from the *London Free Press*. See text for details.

NOTES: Values represent proportions of 185 issues.

sirable changes (they were the principal objectors to change in over 29 per cent of the conflicts). Their interest in securing political support often finds them allied with individual consumers. However, in some cases their personal business or development interests may influence (or dictate) their positions and alliances on given issues – a prospect which has been documented by Lorimer¹⁵ concerning major conflict issues in Toronto.

Although the newspaper evidence shows that institutions (e.g., schools and hospitals) were seldom overtly involved in conflicts, their services were frequently a source of contention, and one suspects that they may have influenced the proposals and objections put forth by the policy makers. Similarly, although the newspaper reports assign low levels of conflict involvement to professional planners, Adler's¹⁶ study of land-use planning in London reveals the importance of their efforts to influence land-use policies. This finding is more forcefully supported by Kaplan¹⁷ in his analysis of political decision-making in Metropolitan Toronto. In London, planning and administrative professionals play leading roles in developing public responses to private development initiatives and in suggesting the course of public development and guidance policies. Recently, the city was divided into planning districts in an attempt to formalize greater public participation in the early phases of plan formulation; but, in practice, the style of planning in London remains highly centralized.

Land-Use Issues in Conflict

For the issues matrix (Table II), 37 of 64 possible combinations were present, but only 13 of these had five or more conflicts. In this case, diagonal entries accounted for 38 per cent of the conflicts, the bulk of these relating to demands for improved transportation (e.g., wider roads, more parking, one-way traffic) and to proposals affecting the levels of institutional services (e.g., the closure of schools, hospital expansion). The prominence of these issues suggests the dominant automobile-orientation typical of many middle-size North American cities, and it reflects the impact of demographic changes on facility usage and the rising standards of expectations for basic educational and health services. In general these diagonal entries refer to issues over the expansion or reduction in the intensity of existing uses. This is particularly evident for the proposals to expand the transportation infrastructure, accounting for 22 per cent of all proposals. Thereafter, a rank ordering of the column totals for the remaining seven proposed land uses reveals a rough scaling in close accordance with likely economic returns to investments. Retail-commercial expansion, high-density residential development (including townhouses and apartment buildings), and proposals for institutional facilities each accounted for between 15 and 16 per cent of the conflicts. Continuing in rank-order, these were followed by low-density residential developments (including single-family detached, semi-detached, and duplex units, and large tract-developments of such housing), 13 per cent of all conflict issues; manufacturing and processing (inclusive of industries, scrap yards, gravel pits, pollution-control facilities, and other noxious but necessary activities), 8 per cent; recreation, 8 per cent; and open space (farm land, floodplain land, and forested areas), only 3 per cent.

Identifying the Conflict Variables

Owing to the absence or small number of issues in several cells of the matrices, the aggregation of classes was necessary in order to meet requirements for the use of statistical techniques. Thus, the new set of conflict variables is based on the row and column totals of the two matrices. Among the participant types, the totals for planners and for institutions were combined with those of policy makers to form

a public-sector category, corporate consumers (retail merchants, service establishments, manufacturers, etc.) were combined with developers to represent the private economic-sector, and the household sector (individual consumers) remained intact. For the land-use-issue matrix, the two residential categories were combined for existing uses, as were the recreation and open-space groupings for both existing and proposed uses. The variables resulting from these aggregations are summarized in Table III along with two additional conflict variables relating to issues concerned with the protection of historical and architectural artefacts and to issues focused on demands for public facilities (including schools).

The identities of preservation and public-facility issues were obscured by the matrix formulation of typologies; yet, their frequency of occurrence warrants their inclusion as separate categories. Preservation-of-the-past issues included 19 per cent of the total number of conflicts, but accounted for 28 per cent of the newspaper's

TABLE III

LOCATIONAL CONFLICT DATA SUMMARIZED ACCORDING TO CENSUS TRACTS AND ISSUES, LONDON, ONTARIO (1970-73)

	Newspaper coverage ¹ (square inches)	Proportion of conflict coverage	Number of conflicts	Average conflict size (square inches)	No. of census tracts with conflicts	Av. square inches per tract of occurrence	Proportion of tracts affected (of 51)
PARTICIPANTS IN CONFLICT							
<i>Proposers of Change</i>							
1. Individual consumers	2131.2	0.10	27	78.9	24	88.8	0.47
2. Corporate consumers and developers	7537.7	0.35	81	93.1	42	179.5	0.82
3. Planners, policy makers, and institutions	11694.1	0.55	77	151.9	44	265.8	0.86
<i>Objectors to Change</i>							
1. Individual consumers	14572.1	0.68	117	124.5	38	383.5	0.75
2. Corporate consumers and developers	608.1	0.03	9	67.6	8	76.0	0.10
3. Planners, policy makers, and institutions	6182.8	0.29	59	104.8	37	167.1	0.73
LAND USES IN CONFLICT							
<i>Existing Uses</i>							
1. Low and high- density residential	3949.7	0.18	30	131.7	23	171.7	0.45
2. Retail-commercial	1460.3	0.07	15	97.4	6	243.4	0.12
3. Manufacturing and processing	1700.1	0.08	11	154.6	11	154.6	0.22
4. Transportation	3117.2	0.15	27	115.5	21	148.4	0.41
5. Institutional	3919.9	0.18	21	186.7	16	245.0	0.31
6. Recreation and open space	7215.7	0.34	81	89.1	30	240.5	0.59

TABLE III (continued)

	Newspaper coverage ¹ (square inches)	Proportion of conflict coverage	Number of conflicts	Average conflict size (square inches)	No. of census tracts with conflicts	Av. square inches per tract of occurrence	Proportion of tracts affected (of 51)
<i>Proposed Uses</i>							
1. Low-density residential	1535.5	0.07	24	64.0	19	80.8	0.37
2. High-density residential	2916.2	0.14	28	104.2	20	145.8	0.39
3. Retail-commercial	2772.3	0.13	30	92.4	15	184.8	0.29
4. Manufacturing and processing	1444.1	0.07	15	96.3	14	103.2	0.27
5. Transportation	6007.8	0.28	41	146.5	30	200.3	0.59
6. Institutional	4691.9	0.22	28	167.6	17	276.0	0.33
7. Recreation and Open space	1995.1	0.09	19	105.0	17	117.4	0.33
CITY-WIDE AVERAGES AND TOTALS	21363.0		185	115.5	44	485.5	0.86
<i>SUPPLEMENTAL CONFLICT CLASSIFICATIONS</i>							
1. School-related issues and demands for public services	2964.0	0.14	22	134.7	17	174.4	0.33
2. Preservation of the past	5982.6	0.28	32	187.0	18	332.4	0.35

SOURCE: Data gathered and calculated by author from the *London Free Press*. See text for details.

¹Inclusive of all general-news articles, editorials, and letters to the editor, but excluding pictures and advertisements. For conflicts occurring in more than one census tract, square inches are divided proportionately to the issue's presence in each of the tracts. For coalitions of participants and for conflicts involving more than one land-use type within the proposer, objector, existing use, and proposed-use groupings, news coverage was divided equally among the categories.

total coverage on locational conflicts. In contrast to this disproportionate level of press attention on preservation issues, the fourteen conflicts concerning school issues (e.g., expansion, closure, busing of students) and the twelve issues relating to the provision of other public services (e.g., sidewalks, health centres, street lighting) represented 14 per cent of the total number of conflicts and received an equal share of press attention.

Aside from the number of conflicts, Table III records the total square inches of newspaper coverage (inclusive of general news articles, editorials, and letters to the editor) for each conflict variable.¹⁸ Selected as a general surrogate for the intensity of conflict issues, the extent of news coverage is suggested as a measure of the overall level of concern about an issue. Table III describes each conflict variable in terms of the number and per cent of census tracts affected, and its average intensity (square inches of news coverage) per issue and per tract of occurrence. In general, these measures confirm previous observations on the roles of different participant

groups and on the involvement of specific land uses. To arrive at a more penetrating interpretation, statistical associations (simple coefficients of correlation) between pairs of conflict variables will be measured. These will be grouped systematically and mapped to reveal the basic functional linkages among the participants and land uses involved in London's locational conflicts.

AN INTERPRETATION OF THE CITY'S CONFLICT STRUCTURE

A correlation matrix, based on all but two of the variables¹⁹ described in Table III plus five additional variables (the total number of conflicts, the total square inches of newspaper coverage for general news, for editorials, and for letters, and the number of conflicts considered before committees of the London City Council),²⁰ has been compiled. The basic structure of this 24 by 24 matrix is shown in Figure 2a as a linkage diagram based on McQuitty's²¹ method of linkage analysis. The data were assembled by census tracts, and the correlation values measure the spatial correspondence among the variables. In the diagram, only those r values significant at least at the 0.05 level are indicated; however, other statistically less-significant linkages with respect to open-space and low-density-residential uses are also shown because of their suggestive structural associations. As is to be expected in a situation where all but one of the variables were derived from a common source, the variables were highly intercorrelated: 49 per cent of the matrix cells had r values greater than or equal to 0.50. The two principal dimensions structured within this matrix are of nearly equal significance.

The first dimension concerns changes and intensification in commercial land use. Individual consumers are seen as suggesting alternative uses to space currently occupied by commercial activities, and strong objections to proposed changes reflect competition from within the economic sector itself. In comparison with the specificity of this first dimension, the second represents a more diffuse linkage of participant roles and land-use involvement structured about the macro-variables of news coverage. The strong reflexive-linkage (0.954) between the total square inches of coverage and editorial coverage exposes the obvious interdependence of these supposedly discrete newspaper functions. However, these variables are related to different areas of dominant concern. Editorials show strong association with issues focused on preservation of the past and on contentious proposals for new or expanded institutional facilities (police station, schools, hospitals, etc.). In contrast, total news coverage reveals seven principal threads of association.

Given this diffuse character of the second dimension, a more meaningful summary of the basic linkages might result if such broad-category variables as those relating to news coverage and to council-meeting data were eliminated. In this way greater attention is directed to the more functionally based variables concerning conflict participants and land uses. As seen in Figure 2b, the linkage structure of the remaining twenty variables yields three dimensions which may be broadly defined in terms of the dominant participant groupings: namely, (1) conflicts involving change in the city's commercial structure, (2) conflicts between the household and public sectors, and (3) conflicts within the public sector.

The first of these dimensions shows changes in retail-commercial activity in strong

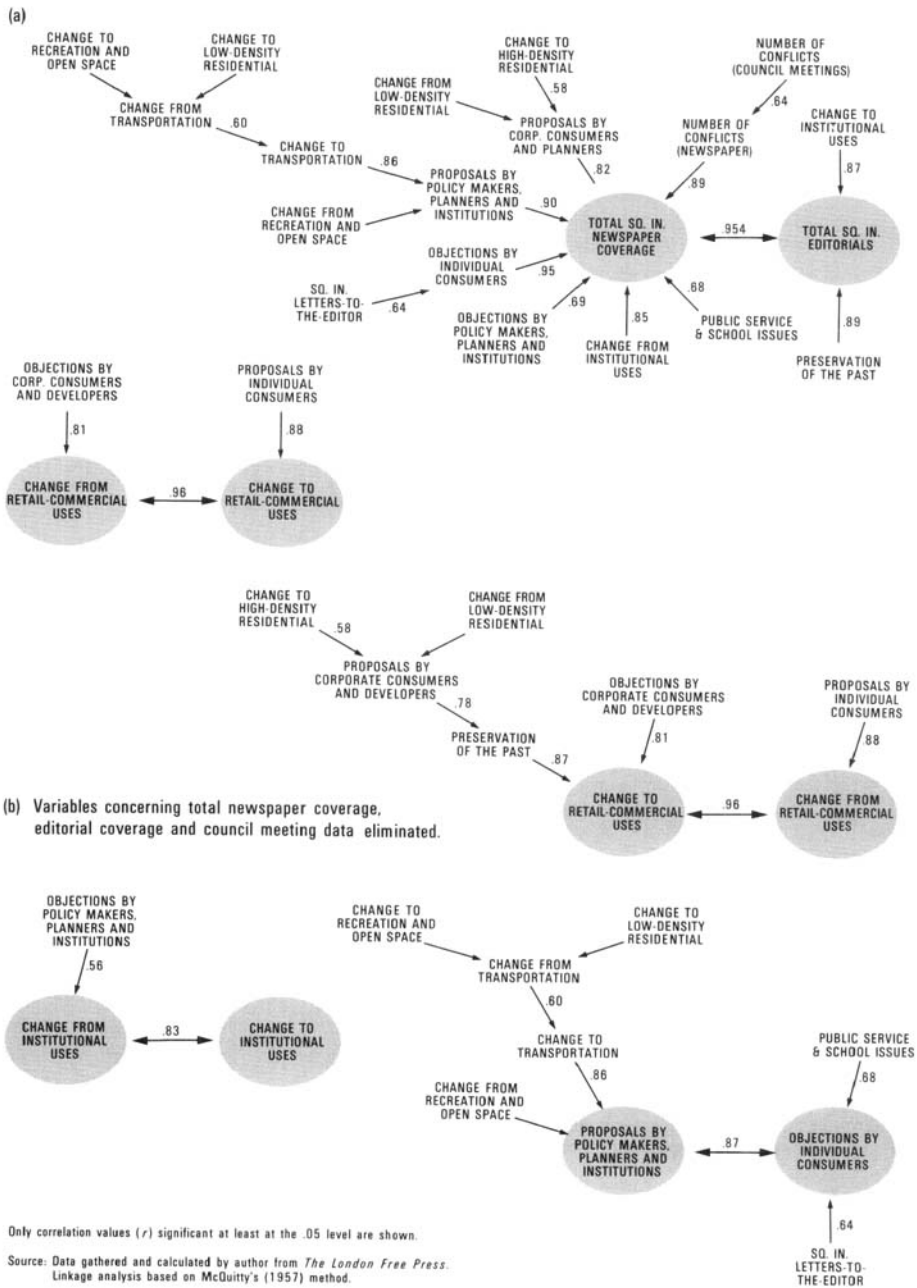


FIGURE 2. Linkage analysis of newspaper coverage on locational conflicts, London, Canada, 1970-73.

association with issues relating to preservation of the past. The roles of corporate consumers and developers figure prominently in such issues and in conflicts concerning transitions from low-density to high-density residential uses. In the second dimension, opposition by individual consumers to proposals put forth by public-sector participants (particularly in regard to transportation) is complemented by their demands for public services and their concerns over school-related issues. Not unexpectedly, letters to the editor show close association with consumer objections to public-sector proposals. The final dimension is structured about changes involving institutional land uses and the concerns expressed within the public sector. Although these dimensions represent the basic structure of conflict patterns as interpreted from the newspaper, other important associations were not exposed by the linkage diagrams. For example, frequent objections by household and public-sector participants to proposals put forth by the economic sector accounted respectively for 27 and 15 per cent of all conflict issues.²²

Each of the three principal dimensions revealed in Figure 2b has its own geography, the interpretation of which is facilitated by mapping the distribution of the sum of newspaper coverage (in square inches) for its pair of reflexive variables (see Figure 3). In this way, the two most highly intercorrelated variables of each dimension are treated as surrogates of their respective dimensions.

In Figure 3, the three dimensions are distinguished clearly by the extent of their geographic coverage of the city. Intense concern over retail-commercial expansion is oriented almost exclusively towards the city's core. Only 30 per cent of the city's census tracts had conflicts over these types of issues and one of them, tract 22, accounted for 61 per cent of the news coverage on conflicts relating to retail-commercial expansion. Conflicts over the development of peripheral shopping centres were minimal, possibly reflecting the effectiveness of the planned separation of these essential services from other less-compatible uses (e.g., single-family homes).

In sharp contrast to the first dimension, conflicts resulting from individual-consumer objections to proposals by the public sector portray a much broader spatial coverage, affecting more than three-fourths of the city's census tracts. Within the core area of heavy conflict concentration, issues concerning transportation, the rezoning of existing residential areas, and the preservation of historical buildings were significant. Elsewhere, proposed transportation changes were instrumental in generating high levels of conflict along the eastern edge of the city; to the north, northwest, and southwest, the protection of park lands and the provision of public services to expanding residential regions were important. Many of the census tracts which were unaffected by locational conflicts of these types were occupied by specialized land uses (e.g., railroad and industrial properties) which were largely non-residential in character.

The geographic pattern of the third dimension resembles that of the second dimension, but in nearly all census tracts the levels of conflict involvement and the spatial coverage are less. The conflicts which underlie this pattern represent disagreements within the public sector over the best ways of meeting the city's needs for institutionalized services (e.g., education and health). One-third of the city's census tracts were affected by such conflicts, ranging from proposed school closures

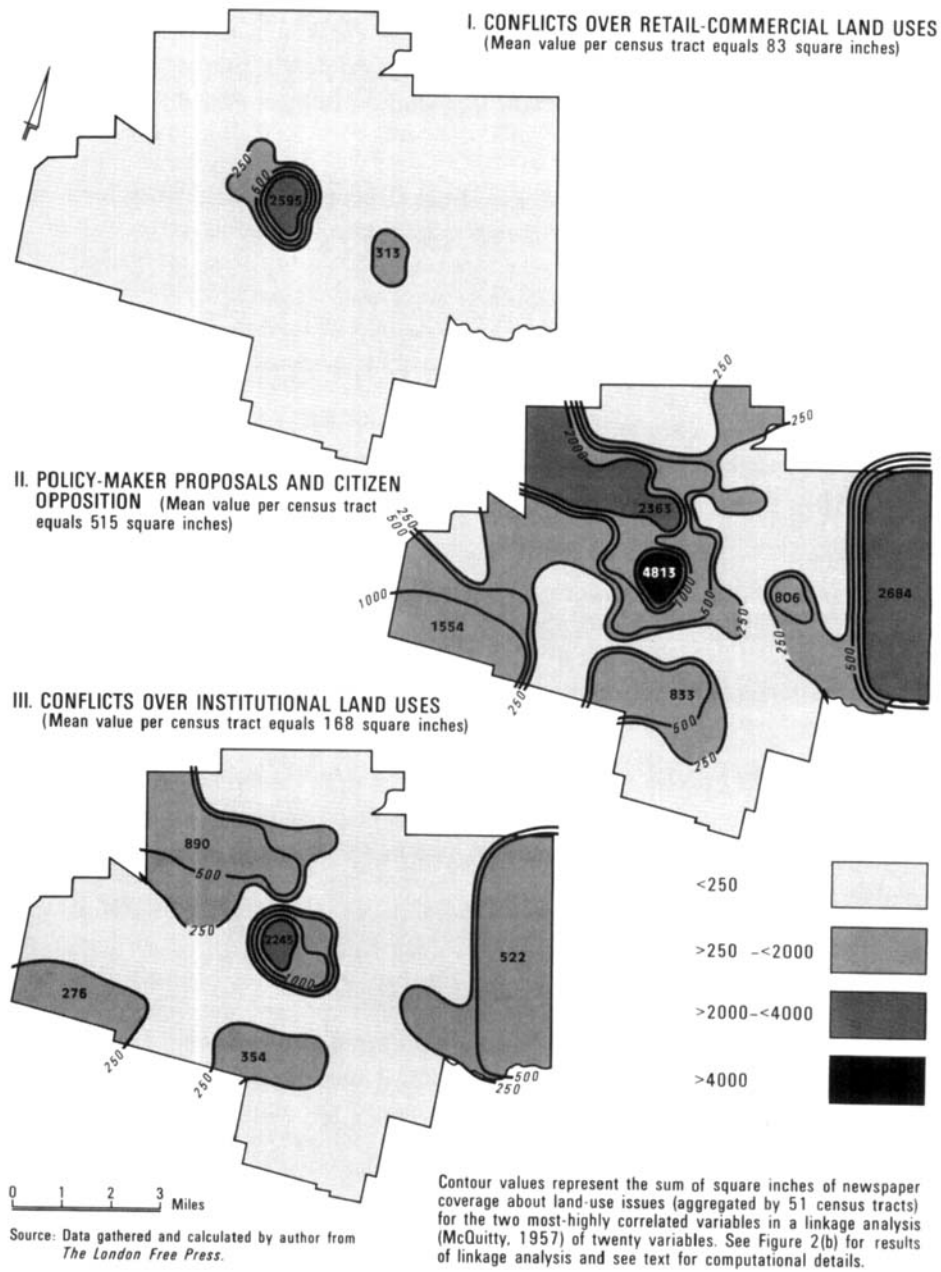


FIGURE 3. Structural dimensions of locational conflicts, London, Canada, 1970-73.

within the core region to hospital- and university-related land-use issues in the city's north and northwestern sectors.

In general, the linkage analysis of the conflict variables has demonstrated that locational conflicts may be structured into distinct dimensions according to the combinations of participants and land uses involved. Additionally, it is apparent that these dimensions also possess distinctive spatial structures. Spatially, the common denominator for all three dimensions was the importance of the city's core. Census Tract 22 accounted for 61 per cent of the news reports on issues involving retail-commercial expansion, 18 per cent of coverage on conflicts between the household and public sectors, and 26 per cent of coverage relating to issues concerning institutional land uses. But notwithstanding this significance of the city's core, the three dimensions showed marked variations in the degrees to which they affected the remainder of the city.

SUMMARY, CONCLUSIONS, AND EVALUATIONS

This paper has described the basic dimensions of London's locational conflicts as derived from a newspaper survey. It was observed that certain types of proposals for land-use change more frequently evoked conflicts than others – particularly those concerning transportation, the operations of major institutions such as schools and hospitals, high-density-residential developments, and commercial expansion. In general, issues relating to institutional land uses and to concerns over preserving artefacts of the city's past evoked high degrees of concern by the press. Whereas policy makers and developers were the dominant proposers of those land-use changes leading to conflicts, individual consumers were the principal objectors to change in the majority of cases. Although these observations seem quite straightforward, it is evident from the participant and land-use matrices (Tables I and II) that urban conflict patterns display complex interdependencies linking a wide range of possible participant and land-use combinations. Nonetheless, a systematic analysis of the involvement of participants and land uses in London's conflicts reveals that the most basic associations can be resolved into three principal dimensions, relating to conflicts over economic-sector proposals, public versus household-sector conflicts, and conflicts within the public sector.

Since this analysis has involved the aggregation of data by spatial units, interpretations based on the intercorrelation of conflict issues and their participants must be evaluated with considerable caution. Although it seems reasonable to expect basic interdependencies to exist between various participant groups and proposals for land-use change, high correlations owing to the use of spatial-ecological units do not necessarily imply the presence of cause-effect relationships. Full disclosure of such associations would require a more behaviourally rooted analysis than that adopted here. A similar criticism stems from the classificatory schemes used for aggregating the data. Although the typologies of participants and land uses are quite conventional, the individual labels are potentially misleading. For example, an assumption that all conflicts involving the same combination of participants will result in the same behavioural responses is unwarranted. Although participant labels may elicit certain stereotyped images, variability of motivations may be expected within cat-

egories. Nor may it be assumed that all conflicts concerning a specific set of land uses are of the same level of significance, either to the contestants or to the community in general.

Aside from the potentials of ecological fallacy, it is evident also that categorizations of conflicts may obscure the important political, social, and emotional considerations which frequently accompany them. A data base so structured is understandably deficient in its potential for exposing these and other important aspects of locational issues, notably with respect to considerations of strategies adopted by conflicting groups,²³ to specification of the legal, financial, and argumentative resources they employ,²⁴ and, above all, to identification of the more fundamental socio-political issues of which locational conflicts and their outcomes may be merely symptomatic. Although this research has not provided an in-depth appraisal of the social and political bases of locational conflict,²⁵ it has included among its strong points a breadth of analysis – focusing on a large set of conflicts of considerable variety occurring in all areas of the city – and objective procedures of measurement.

Irrespective of the objectivity of measurements, the use of newspaper coverage for identifying and weighting conflicts may be regarded as contentious. Nonetheless, most newspapers display a consistency of bias which can be identified. This was revealed by Cox and Morgan's exhaustive analysis of both daily and weekly papers in the area about Liverpool, England,²⁶ and it is demonstrated by the evidence on locational conflicts collected from the *London Free Press*.

Since this research did not focus on the viewpoints and ideologies advanced by the press, investigator biases stemming from subjective interpretations of what the newspaper was saying have been minimized. The data base required only the identification of the issues receiving press reportage, and their classification according to the participant and land-use categories and measures of the square inches devoted to each issue. From this information, one possible way of determining the consistency of press bias is to compare the percentage of newspaper coverage devoted to an individual category of participants against the percentage of all issues in each category.

In Table IV and Figure 4 proportions of the number of issues and the square inches of coverage are shown for the combinations of the three principal participant sectors. In general, it appears that news coverage was allocated fairly; that is, in direct relationship to the number of issues in each sector. However, it is evident that greater-than-average per-issue coverages were allocated to conflicts within the public sector and between the public and household sectors. In contrast, less-than-average per-issue coverages were assigned to conflicts involving the economic sector (corporate consumers and developers). Nonetheless, it is interesting that the linkage analysis and the mapping of its structural dimensions revealed the dominance of the city's core area as a centre of conflict over retail and commercial expansion – interests which are clearly compatible with proposals from the economic sector. From this, one may conclude that the biases in press coverage were insufficient to distort in any basic way the dimensions revealed by the linkage analysis. However, this is not to say that the newspaper presents a complete image of the city's conflicts. In fact, it can be argued that the absence of newspaper reports on certain areas or given issues may be an equally valid social indicator which might reflect either the lack of access to the press for some or the alienation of those who choose not to express grievances.²⁷

TABLE IV
PROPORTIONS OF 185 CONFLICT ISSUES BY MAJOR CONFLICT-PARTICIPANT CATEGORIES

Proposers of change	Objectors to change			Proposer totals
	Household sector	Economic sector	Public Sector	
Household sector	0.062	0.008	0.076	0.146
Economic sector	0.273	0.019	0.151	0.443
Public sector	0.297	0.022	0.092	0.411
Objector totals	0.632	0.049	0.319	

PROPORTIONS OF NEWSPAPER COVERAGE BY MAJOR CONFLICT-PARTICIPANT CATEGORIES

Proposers of change	Objectors to change			Proposer Totals
	Household sector	Economic Sector	Public sector	
Household sector	0.050	0.003	0.047	0.100
Economic sector	0.230	0.017	0.105	0.351
Public sector	0.401	0.009	0.137	0.547
Objector totals	0.681	0.029	0.289	

Values represent proportions of 21,363 square inches.

SOURCE: Data gathered and calculated by author from the *London Free Press*, 1970-73. See text for details.

It is difficult to generalize concerning the utility of newspapers for studying conflict patterns in other cities or regions since they may vary greatly in terms of their biases and the competencies of their reporters. However, investigations currently under way should provide insights on this problem.²⁸ It is suggested that even highly biased news coverage is worthy of study given the potential of the press to shape public awareness and attitudes over local issues. Of particular interest are centres having a variety of newspapers espousing different viewpoints or catering to different clienteles and readerships. For instance, what basic differences would characterize the local conflict-images of Montreal's French and English dailies?²⁹ In addition, the community weeklies of large cities could provide clues to more local images of conflict patterns, although, according to Janowitz³⁰ and to Cox and Morgan,³¹ they generally are not known for their willingness to give serious attention to controversial issues. An "alternative press," having an espoused objective for challenging the local establishment with its investigatory probes, had not emerged in London during the period of this analysis. However, in centres where such a press does exist, an opportunity for comparing its coverage with that of the more establishment-oriented press might be diagnostic of the fundamental social and political roots of many conflict issues.

Although several problems have been identified in this evaluation, it is contended that this exploratory research has provided a plausible, though not necessarily complete, image of locational conflicts in London. The identification of basic structural dimensions relating to the participant and land-use characteristics of conflicts is regarded by this author as sufficiently encouraging to warrant the extension and refinement of the methodological and technical approaches adopted in this research.

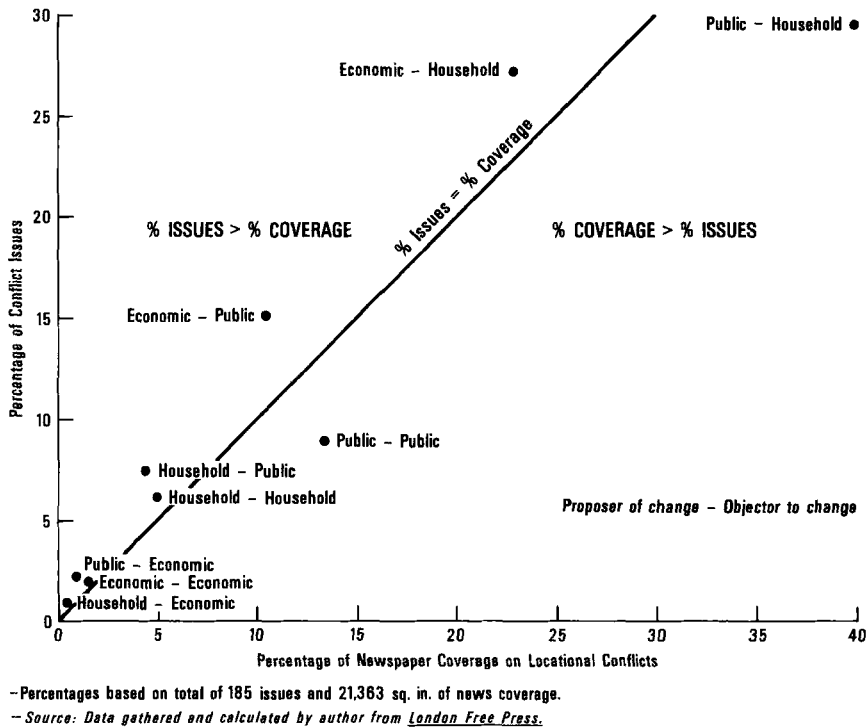


FIGURE 4. The percentage of conflict issues and the percentage of newspaper coverage by principal participant sectors, London, Canada, 1970–73.

In particular, comparative analyses of the conflict patterns of several cities are essential if more general findings are to be obtained and if an assessment is to be made of the impacts of varying institutional and social arrangements on urban conflict patterns.

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NOTES AND REFERENCES

1. In part, this stimulus took the form of a discussion-paper series, *Research on Conflict in Locational Decisions* (Philadelphia, Pa.: Regional Science Department, University of Pennsylvania), published between 1970 and 1973.
2. J. Seley, "Paradigms and Dimensions of Urban Conflict" (Philadelphia: unpublished Ph.D. dissertation, 1973).
3. Kevin R. Cox gives specific consideration to the distribution of educational opportunities in *Conflict, Power and Politics in the City: A Geographic View* (New York: McGraw-Hill, 1973).
4. David Harvey, *Social Justice and the City* (London: Edward Arnold, 1973).
5. M. Dear, "Spatial Externalities and Locational Conflict," in *Alternative Frameworks for*

- Analysis*, ed. D. Massey and P. Batey (London Papers in Regional Science, vol. 7; London: Pion, 1977), pp. 152-67.
6. Larry S. Bourne, "Urban Structure and Land Use Decisions," *Ann. Assoc. Amer. Geog.*, 66/4 (Dec. 1976), 531-47.
 7. This criterion is thoroughly discussed by Kenneth Boulding in *Conflict and Defence: A General Theory* (New York: Harper and Row, 1962), p. 5.
 8. The freeway issue was the most significant locational conflict to occur within the London area during the period from 1963 through 1974. It accounted for approximately one-seventh of all news coverage on land-use issues during the study period. However, because of its concern to large areas of the city and to the surrounding region, its inclusion in the analysis would have obscured important features of the city's conflict pattern. In addition, since this issue both preceded and post-dated the study period, its inclusion in the study would have given an incomplete and not necessarily representative impact of this issue on the city's conflict pattern. It is not known to what extent this issue diverted the energies of citizens away from or towards other potential or actual conflict issues. Nonetheless, several community groups were initially organized in response to this issue and have since continued their activities to protect and enhance the quality of their neighbourhood environments.
 9. The *London Free Press* is a daily newspaper which gives a broad range of coverage to international, national, and local news. It is a locally owned paper which claims to be independent of political and other affiliations. It is London's only daily paper.
 10. Most issues were settled in the span of days and weeks, but some extended for months and a few had durations of a year or more. In this study, since the same four-year period applies to all census tracts, the totals for newspaper coverage are comparable between tracts. It is questionable whether or not the four-year totals are suitable surrogates of the temporal spans of issues. High totals for a tract may be the result of many minor, short-term issues. In any case, the temporal pattern of conflict is a subject which warrants more explicit investigation than has been accorded to it in this research.
 11. D.G. Janelle and H.A. Millward, "Locational Conflict Patterns and Urban Ecological Structure," *Tijd. Econ. en Soc. Geog.*, 67/2 (1976), 102-13.
 12. Anatol Rapoport, *Conflict in Man-Made Environment* (Middlesex, England: Penguin, 1974), p. 174.
 13. Of course, not all locationally based conflicts can be so neatly pigeon-holed into these dual categories. Some issues may involve a multiple of land-use types and coalitions of several participant types. Seventeen of the 185 issues considered in this analysis had clearly defined participant coalitions and six issues involved more than two land-use categories. Since such coalitions and multiple land-use involvements required that individual conflicts be recorded in more than one cell (usually no more than two) of the matrices, it was necessary to divide through by the number of such entries for each conflict in order to avoid the multiple counting of individual issues. These adjustments have been applied to the data presented in Tables I and II.
 14. Although local community groups, ratepayers associations, and special interest bodies (e.g., Pollution Probe) were involved in many of the locational issues under consideration in this study, their roles were not subject to any of the detailed conceptual and empirical investigations found in David Ley, ed., *Community Participation and the Spatial Order of the City* (B.C. Geographical Series, No. 17; Vancouver: Tantalus Research, 1974).
 15. James Lorimer, *The Real World of City Politics* (Toronto: James Lewis and Samuel, 1970).
 16. Gerald M. Adler, *Planning by Administrative Regulation* (Toronto: University of Toronto Press, 1971).
 17. Harold Kaplan, *Urban Political Systems: A Functional Analysis of Metro Toronto* (New York: Columbia University Press, 1967).
 18. These measures exclude pictures and advertisements. For conflicts occurring in more than one census tract, the square inches were divided proportionately to the issue's occurrence in each of the tracts. For coalitions of participants and for conflicts involving more than two land uses, it was necessary to divide the news coverage equally among the categories represented.
 19. In an original version of this paper the following variables were eliminated for purposes of the linkage analysis since none of their correlation values with other variables were significant at the 0.05 level: changes from existing low- and high-density residential uses, changes from manufacturing and processing uses, changes from recreational and open-space uses, changes to recreation and open space, changes to low-density residential uses, and changes to manufacturing and processing uses. However, on the suggestion of a referee,

- variables relating to residential and open-space uses were incorporated in this presentation because of their numerical importance. As indicated in Tables II and III, pressure for change was greatest on existing open-space and low-density residential uses.
20. Using the same criteria as in the newspaper survey, locational conflicts were identified from the minutes of the meetings of the standing committees of the London City Council for the year 1973. Most of the 159 issues concerned either zoning issues being reviewed by the Land Use and Development Committee or traffic issues being considered by the Streets, Traffic and Transportation Committee. Since these data covered only one year, a detailed comparison with the newspaper reports was not attempted. However, based on this evidence, it is suggested that the number of conflicts considered before the council exceed those reported in the newspaper by a multiple of approximately 3.4. An alternative interpretation is that those issues not reported were settled within the system and did not exact a sufficient threshold of interest to warrant newspaper coverage and public attention.
 21. L.L. McQuitty, "Elementary Linkage Analysis for Isolating Orthogonal and Oblique Types and Typal Relevancies," *Education and Psychological Measures*, 17 (1957), 207-29.
 22. An examination of second- and third-highest correlation values exposed these associations, but they are not reported upon in this paper.
 23. Several case studies offering conceptual insight into strategy considerations for resolving locational conflicts are considered in the discussion paper series *Research on Conflict in Locational Decisions* (see note 1).
 24. See William H. Form, "The Place of Social Structure in the Determination of Land Use: Some Implications for a Theory of Urban Ecology," *Social Forces*, 32/4 (May 1954), 317-23.
 25. Within urban geography, specific considerations of these issues are presented by Kevin R. Cox, *Conflict, Power and Politics in the City*, and by David Harvey, *Social Justice and the City*. In contrast, viewpoints of a wider range of social scientists are presented in Michael Harloe, ed., *Proceedings of the Conference on Urban Change and Conflict, CES, CP14* (London: Centre for Environmental Studies, 1975). A rapidly expanding literature has documented the increasingly important and interdependent roles of citizen action groups, building and land-development industries, and investment managers. They are seeking to organize the spatial structures of cities in their own best interests. Empirical evidence and conceptual arguments based on Canadian experience are most relevant to understanding the roles of these agents in London. Examples include D.G. Bettison, *The Politics of Canadian Urban Development* (Edmonton: University of Alberta Press, 1975); James Lorimer, *A Citizen's Guide to City Politics* (Toronto: Lewis and Samuel, 1972); Wallace Clement, *The Canadian Corporate Elite* (Toronto: McClelland and Stewart Limited, 1975); James A. Draper, ed., *Citizen Participation: Canada* (Toronto: New Press, 1971). Other interesting statements, in a British context, include Peter Ambrose and Bob Colenutt, *The Property Machine* (Middlesex, England: Penguin Books Ltd., 1975); Richard Spiegelberg, *The City: Power without Accountability* (London: Quartet Books, 1973); and J.M. Simmie, *Citizens in Conflict: The Sociology of Town Planning* (London: Hutchinson Educational Ltd., 1974).
 26. Harvey Cox and David Morgan, *City Politics and the Press, Journalists and the Governing of Merseyside* (London: Cambridge University Press, 1973).
 27. Although issues of this type fell beyond the scope of this analysis, the author is aware of instances of housing discrimination against Canadian Indians, students, and other minority groups in London which were not reported in the press (however, this problem has received general consideration in a few articles).
 28. The author has been advised of research on locational conflict using content analyses of newspapers by Alan Burnett of Portsmouth Polytechnic in Portsmouth, England, and by John Mercer of the University of British Columbia in Vancouver.
 29. David Ley of the University of British Columbia has been investigating the spatial pattern of news coverage in Montreal as revealed by the principal French and English dailies.
 30. Morris Janowitz, *The Community Press in an Urban Setting: The Social Elements of Urbanism*, 2nd ed. (Chicago: University of Chicago Press, 1967).
 31. Cox and Morgan, *City Politics and the Press*.