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## **An Analysis on the NIMBY Conflict of Locating Funerary Facilities : From the Viewpoint of Transaction Costs Theory**

By

**\*\*Kuo-Chu Yang**

**Hsing Kuo University of Management**

**\*Ai-Ching Yen**

**National Chengchi University**

### **Abstract**

The public facilities for funerary service are often in short supply owing to the NIMBY (not in my backyard) conflict of locating funerary facilities. It is necessary to break through the obstacle of NIMBY conflict to provide enough funerary facilities. The transaction cost arose from resisting funerary facilities sited in one's own back yard is the crucial point for institutional arrangement. The purpose of this paper is trying to investigate the "transaction cost of resistance" from the point view of new institutional doctrine and access its amount in order to find out the defects of existing administrative institution. There are three cases, including Yuan Shan Fuyuan, Fuh Guei shan cemetery and Da Ping Ding Funeral parlor and crematory, to be selected for positive estimation. The transaction cost of resistance is rather high among these cases. The high transaction cost implicates inequilibrium problems of institution, such as contractual uncertainty, information asymmetries, deficiencies of internalizing the externalities, and rent-seeking behavior. In order to decrease the transaction cost of resistance to achieve the equilibrium of supply and demand for funerary facilities, we make the suggestions for institution adjustments, including

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\* Assistant Professor, Department of Asset Management Science, Hsing Kuo University of Management ; e-mail: g8325750@ms45.hinet.net

\* Professor, Department of Land Economics, NCCU ; e-mail: irene1@nccu.edu.tw



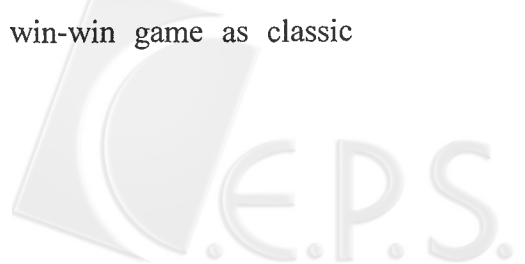
identification and reallocation the property rights, permitting the negotiation among the concerned parties.

**Key words:** Transaction Costs, Funerary Facilities, NIMBY Conflict

## **I. Preface**

With limited natural supply of land and increasing population, it is inevitable that consumers or industries compete with each other for land use location in the process of economic development. Life experiences made funerary facilities locate mostly at nearby villages or communities in Taiwan's early stages because transportation was accomplished by manual labor. Later on, as the city development progressed, the need of industrial, business and residential lands have increased. Much of funerary lands were altered to be non-funerary land. However, the number of death has gradually increased every year, leading to growing pressure from the needs to explore new funerary land.

During the past decade, non-funerary lands pushed their borders towards funerary areas with even faster pace as cities continued to develop and expand in size and scale. Since residents still regard funerals as a disturbance on amenity of their living environment and real estate owners became more sensitive to the land profit after the two real estate raves in the 70's and 80's, it is getting more difficult to provide funerary land and renew funerary facilities for public and private sections under people's "not-in-my-backyard" (NIMBY) sentiment. From the viewpoint of Pigouan welfare economics, a protest on the location of funerary facilities based upon a NIMBY syndrome is a typical issue of market failure, which provides the government a justification to intervene. But Coase argues it is still possible to reach an agreement through voluntary trade, forming a win-win game as classic economics claim (Yu, 1989 : 645-649).



Practical experience tells us that market transaction of funerary facilities is very hard to complete. The negotiation of locating funerary facilities usually ended up with violence and conflicts and caused social instability. In the long run, under the circumstances of insufficient funerary facilities supply and unsatisfied demand, there would develop more and more illegal private funerary facilities, placing the last straw on the already disordered land allocation and use. In the view of Coase theorem, high transaction costs, the major source of market failure stated above, come from NIMBY syndrome of market transaction of funerary facilities and unclear identification of environmental and property rights. Meanwhile, the government responds to the urge requests and attempts to correct the failure by its jurisdiction. However, government intervention increased residents' awareness of being victims and push them to form a self-helping organization, resulting in elevated violence and confrontation. Usually it leads to governmental and policy failure eventually.

NIMBY syndrome must be resolved first in order to install sufficient funerary facilities. The key to handle NIMBY syndrome is to shed a light on the crux of institutional problem by the amount of transaction cost of resistance. New institutional economics reveals that transaction cost would decrease by improving institution problem. Therefore, when transaction cost is considerably low, it will not significantly affect the efficiency of resource use no matter the property right belongs to the developers or the neighbors. This paper attempts to capture some ideas on funerary service management and policy from the perspective of transaction costs theory by investigating 3 cases including Yuan Shan Fuyuan cemetery, Fuh Guei shan cemetery and Da Ping Ding Funeral parlor and crematory and by estimating their transaction cost for conflicts. The paper is broken down into 8 sections: preface, definition, literature reviews, theories, estimation of transaction costs

for funerary facility with NIMBY conflict, meaning of institution with high transaction costs, the analysis and suggestion of the provisions of funerary management and conclusion.

## **II. Definition**

### **A. Funerary Facilities**

The abolished section 2 and 26 of “Cemetery Management Provisions” state that funerary facilities include public and private cemetery, personal tomb, funeral home, crematory and ash containing tower and the like. Government passed section 2-1 of “Funerary Management Provisions” defines funerary facilities as “public cemetery, funeral home, crematory or ash/remain containing facility” on June 14, 2002. Funerary facilities in this paper refer to these established lawfully, excluding non-profit private tomb.

### **B. NIMBY conflict**

NIMBY, Not-in-my-back-yard, a syndrome expressed by individual or community who claim to object to any kind of hazardous activity or facility.(A. E. Luloff, Stan L. Albrecht, 1998:82) Some call it Locally Undesirable Land Uses, or “LULUs”. (Armour, 1984; Brion, 1991; Portney, 1991)It is necessary to allocate many urban service facilities to fulfill resident needs for amenity. However, it is also inevitable to accompany with NIMBY syndrome for these facilities.(Weiberg, 1993).Those facilities with significant NIMBY effect are called NIMBY facilities. A conflict which comes from the resistance or objection to those facilities is called NIMBY conflict. (Yarzebinski, 1992:36)

## **III. Literature Reviews**



In “Exhuming the funeral homes cases : Proposing a private nuisance action based on the mental anguish caused by pollution”, Riseberg (1994) argues court cases that do not involve actual but only area-wide environmental contamination in the United States. He suggests that “a physical invasion of the plaintiff’s land has traditionally been considered a tacit requirement of a nuisance action by the U.S. courts” (Riseberg, 1994:562-564). However, in the mid 20<sup>th</sup> century courts often stopped funeral home establishments adjacent to residential areas based on the nuisance doctrine. For instance, in *Tureman v. Ketterlin*, the Missouri Supreme Court held that a funeral home constituted a private nuisance because it created a constant reminder of death that had a weakening effect on a person’s physical resistance to disease. After the establishment of a funeral home was enjoined, in *Powell v. Taylor*, the Arkansas Supreme Court’s decision rested on the premise that the funeral home presented a “continuous suggestion of death and dead bodies to destroy the comfort and repose sought in home ownership.” (Riseberg, 1994 : 565).

Although there are a number of obstacles to be overcome before a court is willing to recognize mental annoyance or psychological nuisance besides physical inconvenience<sup>1</sup>, based on psychological nuisance the funeral home and prostitution house cases have not been overturned and have been cited in recent decisions. Riseberg’s discussion in “exhuming the funeral homes cases” inspired this study in NIMBY conflict with a concern of time-space

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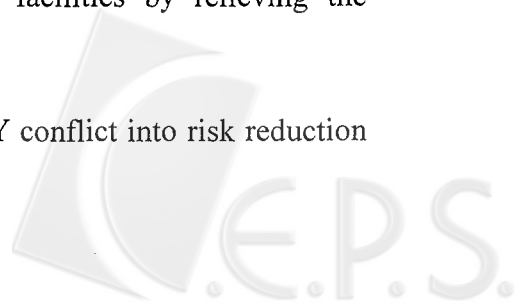
<sup>1</sup> An early example of this was *McCaw v. Harrison*, where the Kentucky Court of Appeals affirmed a lower courts’ decision refusing to enjoin the defendants from using their property for the location of a commercial cemetery. According to the *McCaw* Court, “a cemetery does not constitute a nuisance merely because it is a constant reminder of death and has a depressing influence on the minds of persons who observe it.” The *MaCaw* Court further reasoned that a cemetery would be a nuisance only if it endangered the public health by contaminating the area’s drinking water. (Riseberg, 1994: 566-567)

context of range and content of environmental rights or property rights.

Concerning the residents' attitude to funerary service facilities, Ho (1995) in "A study on NIMBY effect of urban service facilities" surveyed Taipei metropolitan's willingness and attitudes to different kinds of urban service facilities based on central place hierarchy. She classified Taipei metropolis into four layers of hierarchy. The survey revealed that funeral parlor and crematory, funeral home, and cemetery are the most unwelcome facilities in urban hierarchy I, II, and III. Also, cemetery is significantly more unwelcome than other facilities in urban hierarchy IV. Lee (1997) surveyed Taipei residents' NIMBY image, environmental attitude, and cognition to NIMBY facility by stratified sampling. In respondents' self-describing NIMBY image, there are about 45.7% of responses regarding funerary service facilities as NIMBY facilities.

As for the main factors to NIMBY image in Ho's paper (1995), most respondents pointed out psychological unhappiness as the first attribute. Following are landscape destroy, noise, air pollution, and real estate value falling. Lee (1997) supported the results with a similar conclusion; i.e. psychological unhappiness, real estate value, landscape, noise, air, garbage, and water pollution etc are the main factors that influence residents' NIMBY cognition. Notably, many respondents mentioned the "fairness" issue. In other words, urban residents concerned about their quality of life and rights more as their environmental awareness wakened. Therefore, government should pay more attention to communicate and negotiate with local residents, hence increasing the feasibility of setting up facilities by relieving the resistance from them.

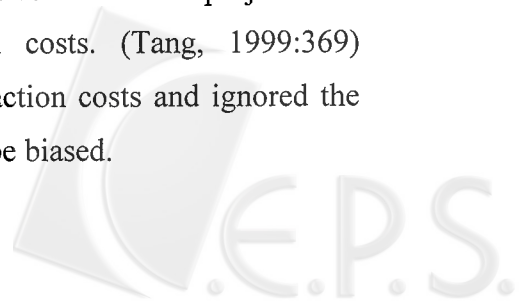
Li (1997) classified the solutions to NIMBY conflict into risk reduction



project and compensation project according to relevant practice and experience on establishment of NIMBY public facilities. His empirical results suggest that government should take appropriate risk reduction or compensation projects for different types of funerary service facilities to increase the acceptance of funerary facilities (Li, 1997). Lee (1998) argues civil participation is another critical way in addition to the two projects above. (Lee, 1998:38-40)

In “A solution to NIMBY conflict of Da Ping Ding funeral parlor and crematory “, Yang (2001) argues that funerary service facilities involve complex folk customs, taboos and conflicts out of subjective mindsets and superstitions; therefore government, funerary servicers, and residents were often unable to reach consensus and in this case held opposite stands till now. Yang tried to find a novel solution to such NIMBY conflict from FengShui and culture opposing to the traditional approach of policy instruments. He proposed several doctrines of funerary service facility location selection and reviewed the feasibility of Da Ping Ding funeral parlor and crematory. However, FengShui and culture approach works only on people with deep-belief in FengShui, therefore hard to institutionalize.

Other studies related to NIMBY conflict include Tang’s (1999) “The institution and strategy for NIMBY environmental conflict management”. He used transaction costs theory to analyze NIMBY conflict situation and strategy of No. 6 Naphtha Cracker Project in I-Lan County invested by Formosa Plastics Group, and the Bayer project in TaiChung Harbor invested by Bayer Group. He found the failure of these two investment projects can be attributed to the overly high transaction costs. (Tang, 1999:369) However, since Tang did not quantify the transaction costs and ignored the attitude of County mayors, his conclusion might be biased.



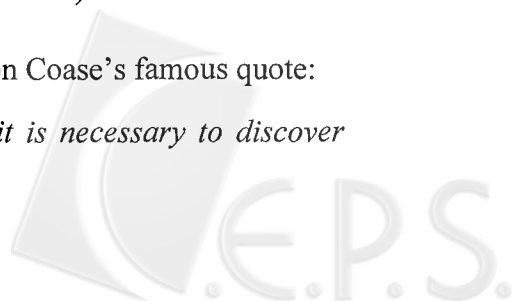
Chen and Lin estimated the transaction costs of the negotiation on change of land use among Carrefour, Bowling Alley, and residents. (Chen, 1999, Lin and Chen, 1999:21-46) Chen and Lin's greatest contribution is to quantify transaction costs and to reach two conclusions: transaction cost is the responsibility of the active parties in the deal, and the main transaction cost is decision cost. However, their study is based on simulations of negotiation process under relevant community participation regulations of Taipei city and KaoHsiung city rather than actual cases. The researchers played arbitrators in the simulation and estimate the transaction costs. In other words, the estimation transaction cost is only based on an "artificial" case or "visual" case.

#### IV. Theories

Transaction costs generally refer to the costs for economic or social system operations. Other than the overhead costs for system operations, it also includes those for setting up, maintaining and changing a system's basic structure. It consists of two parameters: 1. fixed transaction costs, a special investment for institutional arrangement; and 2. variable transaction costs, determined by the number or the quantity of the deals. Typical examples of transaction cost are the costs of using market and the costs of delivering order and exercising rights within firms; that is, the costs of exercising the rights for establishing order. The former is called market transaction costs and the latter managerial transaction costs. Moreover, there are political transaction costs which are associated with running and adjusting the political institutional structure. (Furubotn and Richter, 2000:42-49).

Speaking transaction costs, we have to mention Coase's famous quote:

*In order to carry out a market transaction it is necessary to discover*





*who it is that one wishes to deal with, to inform people that one wishes to deal with and to what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on. (1960:15)*

Dahlman categorized market transaction costs further based on different stages in the transaction process: 1. search and information costs or the costs of preparing contracts; 2. Bargaining and decision costs, or the costs of concluding contracts; and 3. supervision and enforcement contracts. (Dahlman,1979:148) In terms of management transaction costs, Furubton and Richter summed up Williamson's ideas, classifying them into: 1. the costs of setting up, maintaining or changing an organizational design; and 2. the costs of running an organization, which fall largely into two subcategories: information costs and the costs associated with the physical transfer of goods and services across a separate interface. Political transaction costs includes: 1. the costs of setting up, maintaining and changing a system's formal and informal political organization; 2. the costs of running a polity. Su (1994) approached from the perspective of property rights structural adjustment and categorized transaction costs into: 1.acknowledge costs, 2.negotiation costs, 3. regulation costs, 4. risk reduction costs, 5. dispute costs. (Su, 1994:29-30) With finer classification, Su's categorizing method is similar to Dahlman's. To investigate the negotiation cases of the establishment of Carrefour supermarket and Bowling Alley, Chen (1999) comprehended Coase's and Dahlman's ideas and defined transaction costs to be search costs, information costs, decision costs, bargaining costs, supervision costs and enforcement costs. (Chen, 1999:23-24) Furthermore, Lin (1999) also took the same categorizing method as Chen did.

On the other hand, Ostrom, Schreder and Wynne (1993) quoted Williamsom's words and categorized contracting costs as ex ante and ex post

transaction costs. Ex ante transaction costs are largely coordination costs existing in a greater or smaller extent whenever individuals engage in long-term relationships, even when they have the same objectives and refrain from all opportunistic behaviors<sup>2</sup>. Ostrom et al. argued that transaction costs consisted of time-value and resource-value of certain activities, and that “making side-payments to obtain agreement from those opposing to a particular undertaking” belongs to ex ante transaction costs. (Ostrom, Schroeder and Wynne, 1993:47-48) Transaction costs often reduce economic efficiency. To save transaction expense and realize high efficient resource allocation, people have been seeking various formal or informal transaction patterns and rules.

In establishing funerary facilities, by accessing the purpose and content of the protest, we believe the opponents mainly worry about negative externalities brought about by funerary facilities, thereby harming their environmental rights and property rights. Since the transaction of environmental rights or property rights is the solution to the conflict, the nature of such costs can be regarded as market transaction costs. In terms of the attributes and contents of production, the provision of public goods such as legislation, national defense, justice, transportation and education also involves the costs for running polities. These are current expense for former affairs set up by sovereignty's obligations. (Smith[1776] 1976:689、709、723、814) The nature of government-provided funerary facilities belongs to the merits, being part of the social administration operation with a property of political transaction costs.

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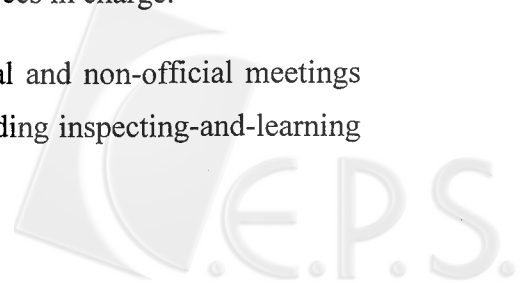
<sup>2</sup> Coordination costs exist not only in ex ante transaction cost, but also in ex post transaction cost if the original agreement could not solve the practical problem and needed to be revised by renegotiating. (Ostrom, Schroeder and Wynne, 1993 : 48)

## **V. Transaction Cost Estimation for Funerary Facility Establishment with NIMBY Confliction**

### **A. The Indicator for Transaction Cost Estimation**

Typical transaction cost occurs when property rights are involved in market business activities (Kasper and Streit, 1998 : 197) Furubotn and Richter made a more general explanation and categorization for transaction costs, but they did not touch transaction costs of resistance induced by NIMBY facilities. Therefore, Tang (1999), Chen (1999), and this paper would have expanded the applications of transaction costs. As the analysis in Section IV stated, transaction costs of resistance on public funerary facility establishment has the nature of market transaction costs, managerial transaction costs, and similar political transaction costs providing merits. This paper believes any costs used to pay for conflicts and their resolutions are transaction costs. As a result, besides the six costs taken by Chen, in terms of developer's costs or conflict-resolution costs, this paper is going to add on four more costs: feedback, compensation, risk-reducing measures, and the unclassifiable. Below are the explanations of each cost:

- (a) Search costs: The costs to investigate and realize the number of protestants and their backgrounds.
- (b) Information costs: The costs to deliver opinions, communicate on negotiations details, and notify the time and location of meetings.
- (c) Decision costs: The costs of meetings, research and analysis work required to reach consensus within the offices in charge.
- (d) Bargaining costs: The costs to hold official and non-official meetings between the offices and protestants, including inspecting-and-learning



visits by community representatives.

- (e) Feedback costs: The costs to reimburse community construction fees, provide the welfare to community members such as free access to medical health checks, community activities, and discounts to funerary facility utilizations, provide work opportunities including human resource selections and annual salary payments, and construct public facilities for community usage, such as park, swimming pool, activity center, etc, including the fees for planning, design, and construction.
- (f) Compensation costs: The costs to compensate loss in real estate value or business operation.
- (g) Risk-reduction costs: The costs required to alleviate noise, drinking water and air pollution, build facilities such as landscape, and change the planning or design.
- (h) Enforcement costs: The costs to work on negotiations about exercising feedback, compensation or risk reduction measures.
- (i) Supervision costs: The costs to supervise protestants to follow the agreements.
- (j) Other costs: such as the increase in construction costs due to construction delay, destruction of the construction sites by protestants, or the costs for locating the office in charge.

## **B. The result of Transaction Cost Estimation**

### **(a) Fuh Guei shan cemetery**

Private Fuh Guei shan cemetery is located at Jin-san Village in Taipei



County, east bordering Wan-li Village), west Taipei city. Several hundred meters downhill of it there be a villa community. Its land registration is at Jin-san Village, 5,120 meters away from Jin-san Village government in a straight line, about 1.5 hectare in area, belonging to newly developed funerary land. From 1998 to 2001 suffered conflicts and resistance from the downhill community and villa developers. Currently most operational obstacles have been removed except that the outbound road is inconvenient due to transportation limits. During the conflicting period in this case, the developer paid for transaction costs including search costs, information costs, decision costs, bargaining costs, supervision costs and other costs, summing up to be 2,896,520 NT dollars in total (table 1), average 193.10 dollars of transaction cost per square meter. The amount of payment in PR in marriage and sponsor of election reaches 1,574,600 NT dollars. Next are the search costs to employ local people to search the backgrounds of the protestants, and supervision costs to monitor tombs construction sites, 864,000 in total. Following is the attorney fee of 400,000 dollars shared by information, decision and bargaining costs, involving the lawsuit on the passage rights of the outbound road in the community.



Table1: List of transaction costs of conflict resolution for Fuh Guei shan cemetery

transaction costs items	Work detail or quantity, and fees		Total of each cost	notes
	Work detail or quantity	estimated fee		
Search costs	( 50 % ) Partial payment for employing local people Picture and videotape making of the protestants as evidence salary loss 3×2×1,500 transportation fee 3×2×400 meal delay 3×2×80	432,000  9000 2400 480	443,880	Employment of 2 local people for background check on protestants and monitor the construction sites of the tombs 2×18×24,000 = 864,000
information costs	partial payment for attorney fee ( 25 % ) phone bill and paperwork handling fee-small and scattered, hard to estimate	100,000	100,000	During the conflict period the total payment to the entrusted attorney is 400000 NT dollars.
decision costs	partial payment for attorney fee ( 25 % )	100,000	100,000	

Bargaining costs	3x Negotiation with protestant representatives  salary loss 2 ( persons ) ×3 ( times ) ×3000 18000 transportation fee 1800 2 ( persons ) ×3 ( times ) ×300 480 meal delay 2 ( persons ) ×3 ( times ) ×80 1x communication with mayor salary loss 8000 4 ( persons ) ×1 ( times ) ×2000 1600 transportation fee 4 ( persons ) ×1 ( times ) ×400 320 meal delay 4 ( persons ) ×1 ( times ) ×80 12000 4x communication with village officials 2 ( persons ) ×4 ( times ) ×1500 3200  transportation fee 640 4 ( persons ) ×1 ( times ) ×400 200,000 meal delay 4 ( persons ) ×1 ( times ) ×80  partial payment for attorney fee ( 50 % )		246,040	
supervision costs	partial payment for employing local people ( 50 % )	432,000	432,000	
other costs	PR in marriage, funeral etc rituals 125,000 sponsor of election PR 1,400,000 salary loss in delivering PR fee 40,000 2 ( persons ) ×10 times×2,000 transportation fee 8,000 2 ( persons ) ×10 times×400 meal delay 1,600 2 ( persons ) ×10 times×80		1,574,600	
overall total			2,896,520	

## (b) Da Ping Ding Funeral parlor and crematory

Da Ping Ding is the geographical center of the human activity circle in Miao-Li and eighteen villages and townships. It is located at the east bank of Houh-Lurng River's mid stream, a flat tableland amidst hills. The planned location of Private Da-Ping-Ding Funeral Home Crematorium is right at the center of old cemetery, Da Ping Ding, with a military practice ground and a big area of graveyard - No.2 public cemetery Da Ping Ding - nearby. Approximately 500m away northeast from it is National United University; about 1 km away north is the Miao-Li city downtown; about 2,697m away in a straight line is the Miao-Li City Hall. The case belongs to newly developed funerary land, of Miao-Li City land mark and area 0.9970 hectares. Since the "Department of Social Affairs" of Taiwan provincial government approved its establishment in December 1996, and its permission of soil and water conservation construction was granted by Miao-li County Government during April 1998, it has induced strong anguish and a series of protests from the local Hsin-Ying residents and some teachers of National United University. Even now there are still scattered protests, making the Miao-li County Government hesitate to grant construction license. During the period of protests, the developer paid for transaction costs including search costs, information costs, decision costs, bargaining costs, supervision costs and enforcement costs, summing up to be 1,875,000 NT dollars in total (table 2), average 188.06 dollars of transaction cost per square meter. In this case the more obvious protest activities continued for about 3 years. To prepare for the development plan, the developer hired 1 full-time and 3 part-time documentary employee. About half of their work was to resolve resistance and shared by every cost items. Except the higher information costs, other costs are about the same number.

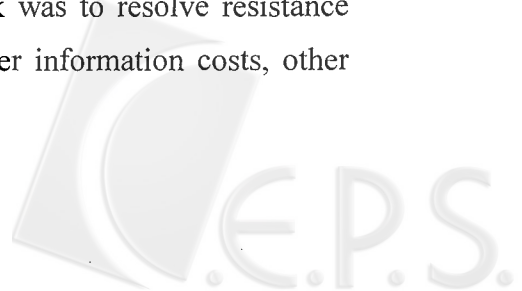




Table2: List of transaction costs of conflict resolution for Da Ping Ding Funeral parlor and crematory

transaction costs items	Work detail or quantity, and fees		Total of each cost	notes
	Work detail or quantity	estimated fee		
Search costs	Understanding numbers and backgrounds of protestants at protest site salary cost 1 ( persons ) ×3 ( times ) ×2,000  partial payment for documentary officials' salary	6,000  300,000	306,000	3×12×100,000 = 3,600,000 in 3 years documentary employee employment: 3 full time, 1 part time, total monthly salary is 10 grants. (assume half of the work involves handling protests and resistance)
information costs	individual visit to protest participants (the first time) salary cost 3 ( persons ) ×7 ( times ) ×2,000 gifts 20 ( persons ) ×300 individual visit to protest participants (the 2 <sup>nd</sup> time) salary cost 1 ( persons ) ×3 ( times ) ×3,000 partial payment of documentary officials' salary	42,000   6,000  9,000 300,000	357,000	
decision costs	partial payment of documentary officials' salary	300,000	300,000	
Bargaining costs	coordination with County Government in handling protest and resistance salary cost2 ( persons ) ×3 ( times ) ×2,000 partial payment of documentary officials' salary	12,000 300,000	312,000	

supervision costs	partial payment of documentary officials' salary	300,000	300,000	
other costs	partial payment of documentary officials' salary	300,000	300,000	
overall total			1,875,000	

### (c) Yuan Shan Fuyuan Cemetery

Yuan Shan Fuyuan cemetery is located at about 5km away east from I-Lan downtown. It is part of Yuan Shan Village governed mountains, at the north of Lan-Yang River and Great Lake River basin which is upstream to I-Lan River. It is also the one of the closest hills at Lan-yang Plains east to the plain. It is about 15m altitudes; its north side and north east side are steep slopes of 20 m to 280 m altitude (I-Lan City Hall, 1992 : 40、49). The planned range was originally private lands for agricultural, farming, forestry, water conservancy, transportation. Below the base is the architecture groups such as Orange House; the southeast side is closely adjacent to No. 1 Public cemetery, Yuan Shan Village. Yuan Shan Fuyuan cemetery resides at Yuan Shan Village, a mono-dimensional facility which includes funeral home, crematorium, ash-containment facility and interment area. It is 34.9475 hectares in area and 2,860 meters away in straight line from Yuan Shan Village Government. During the 5 years from when levy started for land developing constructions in 1993 till the end of construction and operational contract in the end of 1997, this project encountered resistance from the levied land owners and residents nearby. In this period the developer paid for search costs, information costs, bargaining costs and feedback costs. Estimate showed the total transaction costs are 12,507,400 NT dollars (table 3), average 35.79 dollars of transaction cost per square meter. The feedback costs to employ local people and reimburse for the local development fee took

10,460,000 NT dollars. Following is the feedback costs to discount for funerary facility usage, 1,560,000 dollars. Next is the bargaining costs of 400,000 dollars to hold domestic visits for mayors to help reach consensus.

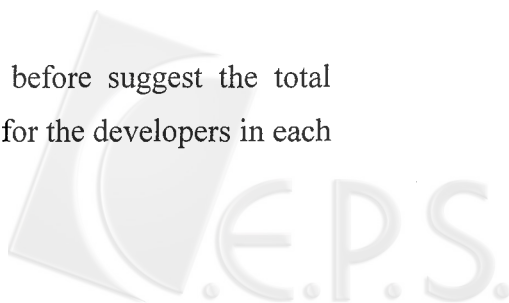
Table3: List of transaction costs of conflict resolution for Yuan Shan Fuyuan Cemetery

transaction costs items	Work detail or quantity, and fees		Total of each cost	notes
	Work detail or quantity	estimated fee		
Search costs				The costs on phone bill and computer usage is too small to easily estimated.
information costs	Communication fee 10 ( times ) ×500	5,000	5,000	
decision costs				No formal decision making meetings (decisions were probably made by oral discussions among mayor and secretary , etc.)
Bargaining costs	negotiation meetings 10x salary cost 8 ( persons ) ×10 ( times ) ×1/2×1,500 meal delay and snacks 28 ( persons ) ×10×80 domestic visit by mayors 4 ( times ) ×100,000	60,000 22,400 400,000	482,400	I-Lan County Government representatives include secretary, officials of social service and land administration, and other officials, 8 in total. Salary is 1500 dollars in average. Residents representatives are about 20 people. Holding domestic visiting and learning by local mayors. 4x.

Feedback	local development reimbursement employment of local residents 13 ( persons ) $\times 14$ ( months ) $\times 30,000$  free access to interment 18 ( persons ) $\times 30,000$ free access to crematorium 72 ( persons ) $\times 2,500 \times 1/3$ free access to the ash-containment tower 72 ( persons ) $\times 40,000 \times 1/3$	5,000,000 5,460,000  540,000 60,000 960,000	12,020,000	
Enforcement costs				employed workers are introduced by local people or are actively seeking jobs so there is no transaction cost for human resource hunting. Other transaction costs are hard to estimate.
Supervision costs				starting in 1997, in the early stage of business operation , local employees were asked to notice the activities of the protestants.
overall total			12,507,400	

## VI. Institutional meaning of High Transaction Cost of Resistance

The investigations of those projects stated before suggest the total transaction cost of resistance is considerably huge for the developers in each



case. The estimated results showed private funerary facilities: Fuh Guei shan cemetery of 2,896,520 dollars and Da Ping Ding Funeral parlor and crematory of 1,875,000 dollars while public ones have Yuan Shan Fuyuan cemetery of 12,507,400 dollars. No matter these cases succeeded or failed, the transaction costs paid are a loss to the total economic efficiency in society as a whole<sup>3</sup>. From the view point of neo-institutional economics, the high transaction costs of resistance imply institutional meanings as following:

**A. Transaction cost is associated with contractual uncertainty**

Contract itself is an agreement, a set of valuable activity or goods exchanged through contracts directly or indirectly by inter-individuals. (Ostrom, Schroeder and Wynne, 1993:47) When it comes to the relationship between the government and citizens, government exchanges a set of service for income with protection, order and justice, including government legislation. Funerary facility developers are constrained and protected by the funerary management law which is an institution arranging property rights. Contracts become uncertain when government withdraws legitimately-given license for installation under the pressure of residents' resistance, when government ought to lawfully grant permits or license but does not (for example the crematorium of Miao-Li Da-Ping-Ding funeral home lost its construction license because the government hesitated considering the resistance in the neighborhood), or when the officials in

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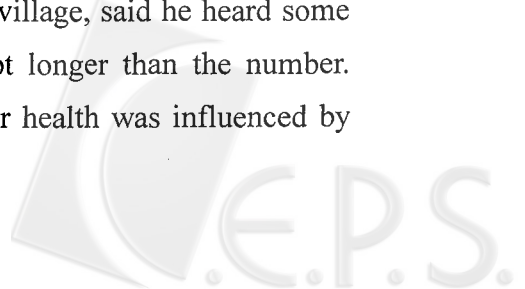
<sup>3</sup> Some funerary facilities can stimulate local employment rate, for example, Fuh Guei shan cemetery hired 2 local people and Yuan Shan Fuyuan hired 13 local people to work. However, during the resistance, the main commission of employees is to understand the background of opponents and persuade them by using their networks. The employees also had to monitor the cemetery. Because they were not hired in a free market mechanism, it is reasonable to regard their salary payment as an economic loss.

charge request the developer to proceed negotiations not required by law in order to avoid pressure, such as government requests developers to obtain agreed consents from over half of all residents. However, the legitimacy of such negotiated agreement is not clear and the opponents often change mind after negotiation reached unity. Uncertain contract boosts the opponents' expectation of the potential benefit from resistance and catalyzes the motivation and emotion for protests; on the other hand it also increases the transaction cost for developers to obey regulations and resolve resistance.

## **B. Contract Uncertainty originates from information asymmetries.**

Information asymmetries happen when the intern quality and quantity of individuals or objects vary greatly and such characteristics are difficult to measure if not taking a significant amount of time and resources. These asymmetries evoke opportunism activities: individuals can benefit themselves and harm others by their hidden knowledge which is unknown to others. If there is no counteractive institution designed to handle such information asymmetry, adverse selection and moral hazard problems could happen (Ostrom, Schroeder and Wynne, 1993:57-58), thereby it will raise transaction costs greatly. According to the cases this paper investigated, there is no consistent attitude about whether funerary service facilities pollute the community environment between opponents and supporters.

For instance, Mr. Hsu working for Yuan Shan Fuyuan cemetery said there was smoke only after cremation container started to operate in 15 seconds. But Mr. Cheng, a mayor of neighbor village, said he heard some residents complained the smoke and smell kept longer than the number. Also, Miss Hong said she was very worry if her health was influenced by



the smoke. And Mr Yang expressed residents could not feel comfortable even government guaranteed the safety of the crematory. The distribution in science and technology information about the effect of crematory on health among a group of folks is asymmetric. This is the reason the resistance to funerary facility occurs. In order to improve asymmetric information and reduce transaction costs, it is necessary to provide professional warrant for quality and transparent monitoring information.

### **C. Externalities are not internalized**

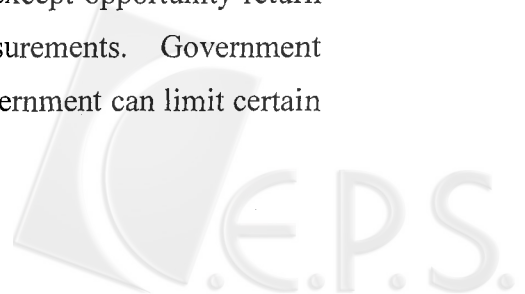
When private costs and benefits differ from all the costs and benefits to society ( externalities ) ,this is frequently the consequence of transaction costs. If it is too expensive to measure and assign all the consequences of private property uses to the owners, people are unable to negotiate a market price to compensate everyone for all the costs they cause and to charge them for all the benefits.(Kasper and Streit, 1998: 198) The nature of environmental rights declared by those opposed to funerary facility installation is in fact common goods. When individual objects compete with each other for environmental resources, it results in externalities between them. In recent years environmental assets are no longer free of lunch in the already crowded Taiwan. Moreover, by economists' concept of "the polluter pays", polluters' activity ought to be rationed by price - for instance to purchase auctioned pollution rights - or regulations, making externalities internalized. This requires not only the premise that pollution is measurable and the responsibility of producing it attributable, but also effective measures that prevent other potential polluters from exacerbating environmental problems. Nevertheless funerary facility installation involves both physical pollution problems and intangible cultural taboo problems, such as difficulty of measuring degree of pollution. The fact that the techniques

and measures to apply 'the polluter pays' are difficult to obtain suggests the better way to lower transaction cost should be permitting the negotiation among the concerned parties, internalizing externalities via satisfying pollution alleviation, feedback, compensation, and the like. Notably the first thing to do is to determine who owns the priority -usually by legislations- among this many environmental resource users.

Among the cases we investigated, Yuan Shan Fuyuan cemetery which implements the policy of feedbacks, including reimbursement to local constructions, employment of local residents and free access to the funerary facilities is a successful one, revealing providing side-payments practically wins over more support of the opponents. Only that in this example the negotiation process and legitimacy is not stated in the law; therefore developers usually agree to participate in negotiation only when forced by the opponents. On the other hand, there are a few cases when opponents regretted soon after unanimity was reached. Consequently even though negotiations between concerned parties could overcome the difficulty of obtaining techniques and measures for implementing "the polluter pays", the resultant contract could easily become uncertain if there lacks compulsory formal regulations to manage such process and legitimacy, leading to raise transaction cost.

#### **D. Rent Seeking increases transaction cost.**

Basically rent seeking involves changing existing laws or other restrictions to acquire and monopolize the scarce resource output of rents. Economics theory defines rent to be the revenue except opportunity return captured by owners of resource via various measurements. Government action often makes renting possible; especially government can limit certain





objects from entering certain market, or can grant particular patent by regulations, thereby creating artificial scarcity. Such scarcity allows profits been made, and rent-seeking individuals also have incentives to compete for governmental institution and gain profits. Yet competing for government favor includes non-productive activities such as lobbyism, bribery, legal fees. From the perspective of the society, these behaviors are a waste of resource (Furubton and Richter , 2000 : 104 、 479). Simply speaking, rent-seeking often leads people to utilize scarce resources, attempting to shift payment rather than creating wealth.

Back to the case of Fuh Guei shan cemetery, although it is considered a successful example of resolving conflicts, it encountered protests from the neighborhood down to the hillside and procedure interference from the local government-such as postponing the approval of the burial permit-when lawfully applying the permit to develop and manage funerary facilities. To release resistance and earn support, the development had no alternative but to sponsor local senior officials, representative election fees and give associated officials gifts or cash gifts in weddings and funerals, spending 1,574,600 NT dollars in total, making up 54.36% of the total transaction cost of 2,896,520 dollars. Such tremendous spending of scarce resources by rent-seeking behavior reflects the funerary management institution is unhealthy. A sound funerary management institution should be able to decrease rent-seeking behaviors induced by NIMBY conflict.

## **VII. Review and Improvement of Funerary Management Provisions**

### **i. Design bugs of the provisions of funerary management**

Under current management institution, whether funerary facility installation would succeed or not totally depends on a single document by the government. There are no channels for communication or regulations for negotiation to follow between developers and opponents (community residents), virtually increasing information asymmetries between protestants and anti-protestants and keeping transaction cost hanging up high. Although on February 3<sup>rd</sup> 1999, Procedure Law of Administration was announced and implemented on January first, 2001, and administration held hearings were provided as a channel for opinion expression, Act 107 of this law stated that hearings were only to be held when “the hearing is required by law” or “administrative office recognizes the necessity of holding the hearing”. That is, if funerary management law does not make hearings compulsory, whether to hold it or not still leaves to individual approval offices to decide. Besides, the announcement or notice of such hearing stated in Act 55 and the determination of its lawful effect stated in Act 108 was to be ruled arbitrarily by administrative offices or handled by special law, making it not truly suitable to solve NIMBY conflict in funerary facility installation.

On the other side, although current funerary regulations does not authorize community members the rights to declare environmental or property rights, once the funerary facility installation case faces resistance and protests, the government often does not act according to regulations but ask or tacitly approve developers to persuade opponents. Hence contractual uncertainty and rent-seeking results from the ambiguity in property right determination.

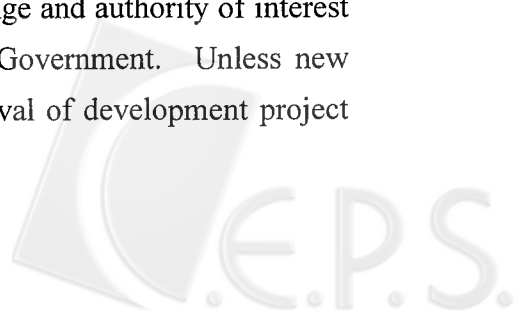
The planning permission of UK asks the development project which may influence the neighborhood environment likes cemetery to belong to the special development ruled by Town and Country Planning Act. Act 65 stated the application of the permission should be depend on the given format and

announced on the local newspapers to provide an opportunity of submitting demur for community residents and interest groups. Generally speaking, the date of announcement should be 7 days earlier than that of the application, and be held not less than 21 days. (Lin, 1993: 28-29) There are different development permission under traditional zoning regulation for every state and local government in USA. For instance, Neighborhood Meeting based on Land Development Guidance System of Fort Collins City should be held for developers and residents. People can make an agreement about the size of development, the content of design, and the degree of land mix use. (Lin, 1993:107-108) It is worthy for us to learn the mechanism which provide the opportunity for negotiation and respect the local participation and option.

## **ii. Proposal for Funerary Management Regulations Improvement**

The stronger humans' characteristics of bounded rationality and opportunism, the larger the transaction cost. To lower transaction cost of conflict, Taiwan Government should allow more negotiation mechanisms for funerary facility developers and residents to reduce their information asymmetry, enhance their rationality, avoid developers' opportunity activity intention by communication and bargain frequently. Then individual decision makers can make self-selection and externalities internalized under utility maximum, the least government intervenes and rent-seeking opportunity. According to the review above, this paper is to give some suggestions including:

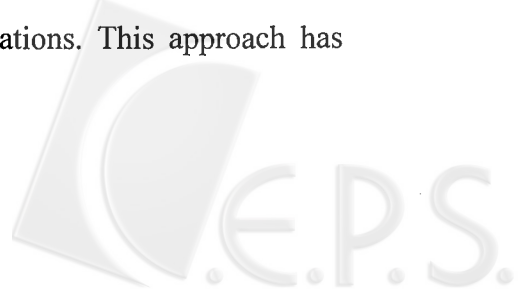
- (a) Add a hearing for funerary facility approval procedure by Government to Funerary Management Provisions. The range and authority of interest groups in the hearing is identified by the Government. Unless new evidence and reason showing up, the approval of development project by the hearing can not be canceled.



- (b) Cancel the restraints of locating place and distance, redefining and reallocating property rights, empower the residents the rights to resist on pollution, noise, and landscape destroy; otherwise, the developers must pay appropriate compensation for approval of development permission and the residents have the rights to choose taking the compensation and standing the nuisance or using the compensation to improve the nuisance. However, the obligation to improve the nuisance can be assigned to the developers if they do efficiently. Furthermore, the court or committee can make judgment by application if negotiation fails. Also, unless providing new evidence and reason, the approval of development project by the judgment can not be canceled.

### **VIII. Conclusion**

Each policy has its best timing and space for the most appropriate application. During the era when people were not aware of community environmental rights, government supported public facilities did not generate NIMBY problems. But in the late 80s and after the 90s, such awareness raised and the government is no longer able to satisfactorily stop or resolve conflicts raised from funerary facility installations. Therefore the design of funerary facility installation management institution has to be adjusted according to the time and the environment. To probe the key to the problem of institution design, we forwent discussing economical behavior from resource and technical factors in the neo-classical prospect. Instead, we approached from the neo-institutional economics prospect, stressing on the limited rationality factor in human activities and the transaction cost factor which is heavily influenced by institutional operations. This approach has great pragmatic implications.



High transaction costs from conflicts imply institutional problems such as contractual uncertainty, information asymmetries, un-internalized externalities, and rent-seeking behaviors. Too high of the transaction cost from institution operation suggests external profits have already happen in the current institution, but institution renovation or supply from the new institution is having a hard time catching up, causing external profits to be wasted. Hence, the purpose of implementing new institution is to lower institution -operational transaction cost and harvest external profits. The powerful resistance against funerary facility installations or the extremely high transaction cost developers spent on it shows the unbalance and supply deficiency from the management regulations; that is, the regulations do not provide developers and opponents an autonomous negotiation space.

To minimize the transaction cost of resistance and balance the supply and demand of funerary facilities, this article proposed ideas for institution improvement, including redefining and reallocating property rights and granting more autonomous negotiation space between the resisted and the resistant. The new institution is believed to be able to internalize externalities, lower contractual uncertainties and information asymmetries, and put a full stop to the intervention of rent-seeking behaviors. Yet, this new institution requires the bureaus to significantly change their traditional mindsets of the stratified, top to bottom type of management. Besides, in the early stage upon implementation of the new institution, the society has to pay for trying-and-fitting during the negotiation process. As a result, whether enforcement is feasible or not is a test that questions the resolution of legislative organizations and administrative authorities.

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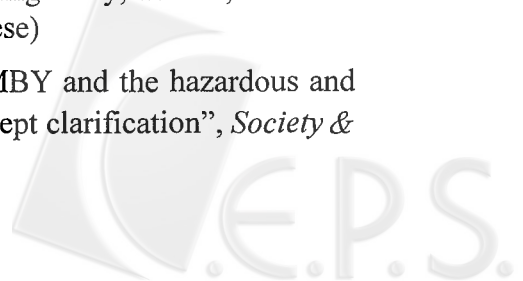
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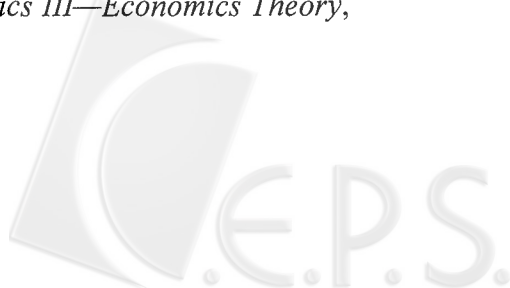
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# 殯葬設施設置鄰避衝突之分析： 以交易成本理論為觀點

楊國柱

興國管理學院

顏愛靜

國立政治大學

## 摘要

殯葬設施設置鄰避衝突導致公共治喪場所供給不足，惟欲設置足夠之殯葬設施，首先需突破鄰避衝突之障礙，而突破障礙之關鍵在於掌握抗爭交易成本大小所隱含的制度問題癥結。本文試圖藉由新制度之交易成本理論觀點，實地訪查宜蘭縣員山福園、台北縣富貴山墓園及苗栗市大坪頂殯儀館火化場等三個殯葬設施設置抗爭案例，估算其抗爭交易成本，進而探析殯葬管理制度在防免設置殯葬設施發生抗爭阻力上的缺陷，並據以研擬改進構想。經研究結果發現各案例之抗爭交易成本均相當高，且高額交易成本隱含契約不確定、訊息不對稱、外部性未能內部化及尋租行為等制度失衡問題。為求降低抗爭交易成本，使殯葬設施的供給與需求達成均衡，本文研擬制度改進構想，包括重新界定並分派財產權及賦予抗爭與反抗爭之間更多自主協商空間，以利未來政策調整及修法之參考。

**關鍵詞：**交易成本、殯葬設施、鄰避衝突。

