

# **The Urban Frontiers of Dhaka : Creating Space above the Water**

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## **Introduction**

One of the major consequences of rapid urbanization in Bangladesh has been the persistent deterioration of housing situation in metropolitan areas. The concentration of the poor in such areas and the ever-widening gap between the demand for and supply of land for housing have led to the development of low-income settlements on environmentally sensitive and hazard-prone lands. The problem is particularly acute in Dhaka where the poor residents have been increasingly constrained to such marginal land, as they are unable to buy or rent land in preferred sites. The inability of the poor residents is largely attributed to the prevailing political situation of the country, ineptitude of public organizations, nonchalant attitude of the government and predatory nature of the formal land market in Dhaka. The urban poor of Dhaka have come to realise that they do not form part of the privileged group(s) to which the city authorities cater their service and that they have been left out to fend for themselves. With this realisation the poor have sought to provide housing for themselves.

In such attempts, unauthorised settlements have developed in various marginal places, especially along and over water regimes in Dhaka. Over the years development of settlements and deliberate encroachment by private and public sector development have led to the disappearance of lakes, canals, flood plains, etc. that existed within the city. In this process numerous ponds and tanks have also disappeared, creating an ecological imbalance with Dhaka experiencing the worst flood in history in 1988. Dhaka has also lost much of its beauty and its natural heritage. On the other hand, attempts to create spaces or pseudo-land over and along water bodies and swamps without proper planning and design techniques have produced undesirable outcomes and led to serious decline in environmental conditions in the immediate and surrounding area where such spaces have been created. Life and health of local residents as well as the city residents have been put to risk.

Considering the gravity of the problem the aim of this paper is to investigate how the urban poor of Dhaka are constrained to marginal places and shed light on aspects which bring about this situation. This paper also aims to highlight the problems produced as a result of creation of spaces over water and suggests measure to reverse such hazardous living conditions of the urban poor in Dhaka. It is assumed that unprecedented urbanization and ineptitude of concerned authorities have produced conditions forcing the

urban poor to live in marginal places. The paper, thus, begins with appraisals of issues related to the urbanization of Dhaka such as its land value and the prospect of housing provision for the poor in this city before investigating the actual problem of creating unplanned spaces for living. Information for this paper has been collected from both primary and secondary sources.

### **The Exodus Towards Dhaka**

The rate of population growth for Dhaka has been 9.3 percent, 9.4 percent and 7.8 percent during the 1961-1974, 1974-1981 and 1981-1991 periods respectively (RAJUK, 1995). This has produced a number of unexpected outcomes in recent decades, such as rapidity of urban growth and mega-population of the city. The reason for such rapid growth is the status of Dhaka as a capital city and the centripetal nature of concentration of major activities and facilities within the city—as a result people from all over Bangladesh are attracted towards this city. Added to it are the prevailing political situation of the country, stagnant rural economy and nonchalant attitude of the government towards decentralization. The result is that Dhaka is suffering from over-population while other towns and rural areas are suffering for want of industries, factories, etc. Informal job opportunities have declined in areas outside Dhaka. The sheer number of people living in this city makes any sort of business prosper and thrive. Thus, businesses or jobs mean chances for people to survive. These chances of survival accelerate the rate of migration. About 310,000 migrate to Dhaka annually irrespective of sex and age (Hafiz, 2000).

High rate of migration has swelled the population of this city by many times. On the eve of liberation Dhaka had a population of 1.2 million whereas this increased to about 10 million within a period of about three decades. There is no ready stock of housing to accommodate the huge number of migrants that arrive in Dhaka daily. The public and private formal sectors do not have plans to accommodate them through crash programs or strategic plans. They are unwanted by the city authorities, but cannot be eliminated either because till today no comprehensive programme has been taken up to decelerate migration towards Dhaka or relocate people towards other towns and cities.

City authorities are unable to provide shelter to all the citizens, as the rate of production of housing is only 2,500 units compared to a total requirement of 60,000 units annually (Hafiz, 2000). Past years' deficit add up to the present requirement for housing compounding the already critical situation prevailing in this sector. If we assume that demand and supply of housing remain constant, the deficit of housing would amount to a total of 2,90,000 units in five years and 5,19,000 units in ten years (Seraj and Alam, 1989). But the demand for housing changes with the change in population growth. Moreover, these housing are not meant for the urban poor who constitute the majority of the city residents.

Inadequate supply and the very low level of affordability of the migrants further aggravate this problem. A very small part of their income is left for housing after meeting

all other necessary expenses. This small income cannot buy or rent comfortable and safe housing. The choice left for the poor is to live in marginal places in sub-human conditions. Recently city authorities have been vigorously trying to eradicate slums and squatter settlements in order to curb down crime and also free the land for other profitable ventures. This has severely constrained the availability of land for housing for the urban poor in Dhaka.

### **Land Value in Dhaka**

A person looking for housing in a city is seeking not only a space for housing, but accessibility to job opportunities and the variety of services that are to be found in a city. Investment in infrastructure and in public and private services (or the economic cost of land) creates the basis for urban land value. These investments create a variety of employment opportunities and services, which attract people to some areas more than others. Land value in Dhaka has increased due to a number of significant factors.

The change of status from a provincial town to a capital city has brought about unprecedented increase in land value. The demand for land for an exploding population has been the most significant factor contributing to increase in land value. The other contributing factors are concentration of major administrative, economic, social, physical, educational activities and facilities in Dhaka and the instability and anarchy prevailing in the political arena. The latter has rather discouraged investors to invest in other towns and cities. The other causes of high land value in Dhaka may be attributed to high rate of inflation, predatory nature of urban land market, lack of comprehensive policy and inappropriate taxation policy, land speculation, inequity in ownership of land, profit making motive of the formal land and housing sector, and above all the high rate of urbanization of Dhaka and the consequent scarcity of land for housing and associated developments. Located on a deltaic region development was concentrated on the scarce flood free land available.

Land value has increased to a very high level with various competitive uses vying for land (refer to Table 1). The disastrous flood of 1988 and the damage it caused to the city made flood protection imperative. However, flood protection measures caused further increase in the value of land. In the context of high land value the housing situation in Dhaka is regarded as extremely unsatisfactory. After independence the lot of the poor was expected to improve in terms of housing and associated services. Considering the total number of poor living in the city and their housing conditions it is evident that the reality is otherwise. The percentage of poor living in marginal places is about 54 percent and there are more than 3,000 slums and squatter settlements within the city (Islam, 1996). These settlements are significant in size; numerous smaller settlements are scattered throughout the city. There are very few agencies that are oriented towards providing housing for the disadvantaged section of the society.

**Table 1.** Land Value in Dhaka

Location	Price of one <i>Katha</i> (in Thousands Taka)		
	1974	1989	2000
Baridhara	25	600	2500
Gulshan	25	600	2200
Banani	25	600	2000
Mohakhali R/A	25	600	1800
Dhanmondi	25	600	2200
Azimpur	17	500	1600
Mohammadpur	25	500	1200
Shanti Nagar	20	500	1500
Uttara Model Town	20	400	1000
Mirpur	10	200	700
Bashabo	2	300	800
Kamalapur	17	400	800
Motijheel C/A	50	2500	3500
Kawran Bazar C/A	41	1000	1200
Mohakhali C/A	33	700	2500

Source : CUS and Sheltech Pvt. Ltd.

### Housing Provision for the Urban Poor in Dhaka

Shelter is a basic human right and a pre-condition for maintaining privacy, safety and good health. In Dhaka, housing is generally developed by public sector agencies, formal private sector agency, and by individuals. The conventional housing programmes by public sector agencies cater to the needs of public sector employees only.

In this regard, the Public Works Department caters to the public sector employees only and within its framework provides housing to low-income employees. At present 100,000 government employees are working in Dhaka for which only 11,885 units of houses and flats are available (see Table 2) (Ullah, 1998). Out of these 54.49 percent are for non-gazetted employees and 45.51 percent for gazetted officers and others. The users consider the environmental conditions of these housing facilities quite satisfactory. These housing facilities are equipped with various types of amenities and facilities. But the supply of government housing is severely inadequate. There is a very long queue of government employees waiting to be allotted housing.

The National Housing Authority has not made any significant contribution towards providing land or housing to the urban poor of Dhaka. Most public and semi-public institutions provide housing, but they are meant for employees of the respective institutions. The total amount of housing catered through respective institutions amount to only seven percent of the total need for housing. The rest of the housing need is met through private sector initiatives. The private formal sector operates with the aim of making profit and therefore, does not serve the needs of the poor.

RAJUK, as the city development agency, has geared all its activities to serve the affluent section of society. RAJUK has provided 7,000 serviced plots to the higher-middle income group and the high-income group. In recent years it has filled up part of a floodplain to develop 2,500 plots in Nikunja. These plots are highly subsidized, although wealthy people buy these plots. The role of RAJUK has been that of a developer aimed at making profit.

Housing development by private developers is a very recent phenomenon in Dhaka. But due to lack of any institutional backup the services of this sector never reach the poor. The tendency to maximise profit by minimising construction and infrastructure costs and by minimising amenities results in costly but mostly sub-standard housing. The cost of a single unit of housing ranges from Taka 1.5 million to Taka 10 million and over. The private formal sector does not cater to the needs of the urban poor in Dhaka.

The role of individuals is one of the most significant development mechanisms of housing in Dhaka as well as other towns and cities in Bangladesh. In Dhaka almost 93 percent of all housing units developed through individual efforts. Although building codes, planning rules, etc. exist, leniency, lethargy and corruption in monitoring housing construction by the concerned agency result in haphazard and indiscriminate development. The aim of individual efforts in developing housing is to maximize rent, that is, profit. The target groups of this sector too are those with wealth, not those without.

It is evident that urban development agencies in Dhaka cater to the needs of the wealthy. Water and Sewerage Development Authority (WASA), Dhaka Electricity Supply Authority (DESA), Titas Gas Transmission Ltd., Department of Roads and Highways, Bangladesh Telephone and Telegraph Board, etc. provide services only on legally acquired land. Illegal and marginal settlements remain outside the delivery system of these agencies. Where these services exist land value is high and out of reach of the urban poor.

Thus land value and provision of services drive the poor out of the market. It is evident from the preceding statements that none of these agencies or individuals caters to the needs of the urban poor. Land supply in Dhaka being inelastic due to the surrounding flood plains the urban poor have extremely limited access to preferred sites for housing. The available average floor area per person is 5.1 sq.m, but the urban poor cannot even procure 1.2 to 1.5 sq.m in the formal land market (Ahmed, 1998).

Table 2. Government Housing in Dhaka

Location	Plinth Area (sft.)	Number of Flats/Houses
Dhanmondi	1250 and 1000	70
Sobhanbag	1350	56
Sukrabad	758, 1000	220
Rayer Bazar	550, 650 and 750	156
Green Road	500, 600, 700, 800 and 1000	534
Zigatola	550, 650 and 750	332
Mohammadpur	Joint Quarters	72 rooms
Green Road	Dormitory, Officers Hostels	152 beds
Eskaton Garden	1750, 2000, 2770, 2820, 3540 (superior type)	136
Eskaton Garden	1250 and 1500	130
Khilgaon	550 and 675	368
Azimpur Colony	600, 650, 658, 800, 810, 926, 950, 1000, 1037, 1250, 1531 and 1741	1618
Motijheel Colony	500, 530, 600, 629, 936, 800, 1000, 1716, 1808 and 2085	2306
Shahjahanpur Colony	205, 530, 629, 750, 839, 1716, 1000 and 1250	169
Mirpur, Paikpara	500, 550, 519, 800 and 901	1902
Banani	1000 and 1250	42
Agargaon	500, 800, 750 and 1000	580
Minto Road, Hare Road Bailey Road, Elephant Road	Plinth area varies from 4231 to 23000	57
Hotel Elysium	414 and 614	87
Sher-e-Bangla Nagar	1378, 1418, 1730, 2038, 2128, 2370, 3798, 7568	152
Sher-e-Bangla Nagar	395, 400, 600, 725, 800, 920, 992, 1200 and 1400	1367
Circuit House Road Bailey Road, Bailey Dump	518, 945, 653, 945, 990, 1350, 1819 and 2282	532
Abandoned Houses	Various sizes	363
Uttara	1000	200
Rajarbag	800	40
Plassey	800 and 750	230
Eskaton	3900 (Judges residences)	14
		<b>Total : 11885</b>

### **Living in Marginal Places: Why People Go for It?**

By marginal place this paper means a place which is sited in and/or around negative externalities and unwanted by people who can afford to buy or rent better housing than those available in marginal places. Negative externalities are natural or man-made features of urban environments that make nearby residences unattractive because they entail actual or potential ongoing problems for local residents and threats of disaster. Examples of marginal places are strips of land between railway tracks or between buildings or along water bodies, pedestrian walkways, etc. These places have low risk of eviction, and are therefore, chosen by urban residents having small incomes. Living in marginal places is the outcome of the operation of urban land and housing markets and these markets are increasingly developing in ways that favour those with sufficient wealth and marginalize those without. Unable to afford housing in preferred sites, the urban poor are increasingly constrained to housing on specific land or sites which are unwanted by the better off.

This paper deals with the type of space that has low risk of eviction. This space has been created over and along water bodies, flood plains, or low-lying land prone to regular inundation. The high cost of landfill, lack of services, lack of accessibility, etc. discourage people with higher income to live in such places. A section of the migrants or low-income people are, however, attracted towards such places because of the low risk of eviction and price/rent of housing. The factors that relegate people to create space over water regimes are given below:

***Affordability and income of the people:*** When a balance has to be struck between high price of land or housing, low income and level of affordability of people— marginal housing or living in marginal places is the only choice left for such house buyers or renters. In this regard, marginal settlements are the outcomes of attempts to strike a balance between low affordability and the price of land or housing. In recent times the government has been trying rigorously to eradicate slums and squatter settlements, without probing into the root of the problem. The result is the spread of settlements all over the city. They cannot be eliminated by such simple procedures, because these squatters have come to Dhaka when other attempts at survival had failed.

***Chances of survival are better in Dhaka than elsewhere:*** More people flock to Dhaka because the chances of survival are better in Dhaka than elsewhere. Connection of major activities and facilities has made Dhaka attractive to people from all over Bangladesh. Besides, administrative institutions, economic enterprises (specifically garments industries), general and specialized medical care, major educational institutions etc. make people gravitate towards Dhaka. The fact that millions of people live in Dhaka and the volume of services that are available from the informal sector makes any sort of business prosper. A slum dweller can sell vegetable and have a small profit left after the end of the day (Hafiz, 2000). Therefore, the reason to migrate to Dhaka is quite obvious. People lacking any skills can find jobs as day labourers, hawkers, servants, etc. Dhaka offers

more chances of survival, whereas these chances are either lacking or offered in very limited numbers elsewhere in Bangladesh.

**Prevailing socio-political condition of Bangladesh:** Instability and anarchy prevailing in the socio-political arena makes production and their distribution highly uncertain. Industrial and commercial ventures are more likely to be located in Dhaka so that their transportation within and outside the country can be ensured. For similar reasons, successive regimes of Bangladesh have not decentralized administration. Rather they have concentrated power in the capital city to strengthen their power base. Greed for power and accumulation of personal wealth by political leaders have left them to be concerned with their own prerogatives rather than welfare of the masses.

**Availability of land for housing:** The availability of land for any sort of development is extremely limited in Dhaka because of its location on a flood plain. Flood protection was necessary to increase the supply of land within the city. But, this has consequently contributed to a very large increase in land price and thus marginalising the poor. This has been compounded by the recent craze for building high-rise apartments whose sole aim is profit making. This has pushed land price further up and created a crisis in the availability of land for housing the urban poor.

## Creating Spaces above the Water

### *Past Trends*

The idea of creating spaces over water or along the edges of rivers is evident all over Bangladesh. Spaces over water were mainly created by two groups of people. Affluent people created the first type of space. They used these spaces for spending their leisure time and for recreational purpose. Small wayside shopkeepers and hoteliers created the second type of space for commercial purpose. Leisure and recreational space for affluent people were built with appropriate building technology and materials so that such spaces could be used for generations. These recreational spaces were built over large tanks within the property or along rivers bordering the property, and took into consideration the natural beauty of the surrounding area. Meticulous care was taken to keep the water clean and enhance the beauty of water bodies by proper gardening. Examples of such space creation abound in the region of Vikrampur as well as other regions of Bangladesh.

The second type of spaces over water or along the edges of rivers is evident all over Bangladesh, specifically near launch and ferry terminals. Shops and small hotels are built on platforms beside major motorways along the edges of rivers. Such shops and hotels are meticulous about waste disposal, because foul odour and unhealthy environment can result in the loss of customers and closure of business. Therefore shop-owners and hoteliers are particular not to dump any perishable waste near or around their shops and hotels. Even toilets are located at a far distance away from the shops and hotels.

### *Present Trend of Creating Space over Water*

The present trend of creating space is a divergence from the past. Past trends of creating space over water was done on a very small scale. But such spaces are being created on a major scale on flood plains, lakes, smaller rivers, and also on a major river like the Buriganga. Past trends of creating space did not contribute to any problem, whereas such spaces created in Dhaka are contributing to numerous problems. Polluted water, blockage of natural flow of watercourses, unhealthy living environment, risky and hazardous housing – are some of the problems that can be mentioned. The bank of the River Buriganga has been encroached by the spaces created over it.

The Segun Bagicha, Kala Bagan, Dholai *Khals*, etc. are now memory. The idea of creating spaces over water for mass housing is indeed unique. The urban poor had to resort to creating space for living when city authorities failed to provide shelter or land to them. But this has created very serious problems. The gravity of these problems has to be comprehended immediately, so that some solutions may be arrived at before it is too late. Otherwise, Dhaka is going to lose its few water resources forever. It has to be understood that lakes, canals, rivers, etc. enhance and intensify the quality of a city environmentally as well as aesthetically and that these need to be protected.

### **Ensuing Problems**

High land value and the reluctance and negligence of city development authorities to provide land and/or housing and associated services leave the poor with no choice but to live in places which are within their affordability, beyond the purview of the formal land market, and possess the least risk of eviction. These places are unwanted by the formal land market and wealthy buyers and are, as can be assumed, marginal spatially and environmentally. In a single phrase it can be said that marginal places are unfit for healthy human habitation, because they lack one or more of the basic amenities. Yet thousands of people reside in such places by constructing their own settlements. Affordability constrains the poor from living in places of their choice, and affordability again constrains them from building safe and hazard proof housing.

**Unsafe housing:** As these spaces are built with mainly untreated bamboo, mite infestation and decay sets in soon. This raises the risk of accident and disaster. The whole settlement can collapse endangering the lives of the residents. As has been recently evident in the case of Rayer Bazar slum where 11 people died after their settlement collapsed into the water after several days of incessant rain. Frequent breakout of fire is typical of slums and squatter settlements. Use of flammable materials like bamboo and polythene sheets raise the risk of fire for the local residents as well as the city residents.

**Absence of services:** Lack of piped water supply, waste disposal and sanitation makes these spaces unsafe for living. Polluted water is used for washing and personal hygiene. Untreated sewage is disposed directly into the water. As these settlements are illegal the city authorities do not extend their services to them. Scale and volume of space creation is not accompanied by supportive services, making such settlements unsafe for living.

**Dumping of waste into the water:** Water is polluted through dumping of all types of waste into the water. Polythene shopping bags, coconut shells and remains of other fruits, untreated sewage, etc. pollute the water very soon. Use of polluted water and living in polluted environment raises the incidence of diseases. These people have little awareness about how they are destroying the environmental condition of a specific area and putting their own as well as other lives at risks. People living in such settlements work all over the city and come in contact with other people raising the risk of spread of contagious diseases. Large amount of solid waste collect between the stilts and soon cover the surface of the water. Fishes and aquatic creatures cease to exist soon. Dumping of waste and sewage create a very unhealthy environment with persistent foul odour. This also creates a perfect breeding ground for insects and vermin.

**Obstruction of natural flow of water and drainage:** Hundreds of bamboo posts (to create platforms) and solid waste disposed into the water soon obstruct the natural flow and drainage of the water regimes over which these settlements are constructed. Water loses its purity and pests and vermin thrive and consequently allow the spread of contagious diseases. If this water regime is part of a larger system then the contaminated water spreads and pollutes other regions too.

**Ongoing problems and threat of disaster:** Problems of one kind or another are inherent in marginal locations and thereby with settlements in such locations. Table 3 shows the inherent problems and disasters of marginal locations in Dhaka. The occurrence of accidents and disasters are regular. A recent survey on marginal slums reveals that residents have to be always on the alert as minor children and babies frequently fall into the water through the gaps in the floor.

Breakout of fire is also frequent due to illegal electricity connections and wood stoves. As these settlements are made of untreated bamboo they decay very easily and the structures collapse after heavy shower of rains and prolonged inundation. Deteriorating environmental conditions, pests and disease are inherent with these settlements and pose high risks to the local residents as well as to the city as a whole.

**Destruction of the natural beauty and environmental condition of the water regimes:** Indiscriminate and unplanned development of settlements in any location causes environmental degradation and the destruction of the natural condition of that particular site. This has happened wherever spaces have been created without proper planning and care. Dhaka was renowned for its natural beauty and intricate network of river and canals in the near past (Hafiz, 1999). Within a span of three decades this has been lost forever. The natural heritage that Dhaka possessed could have made it "a paradise on earth" if measures were taken to preserve and conserve it through meticulous and rigorous planning. Dhaka has been allowed to turn into a jungle of concrete and slums and squatter settlements devoid of natural beauty.

**Table 3 : Marginal Locations in Dhaka : Inherent Problems and Disasters**

Marginal locations	Ongoing problems		Threats of disaster	
	Problem	Site Specificity within the city	Disaster	Site Specificity within the city
Swampy land	Construction Access Insects Diseases	Very high Very high Very high Very high	Flooding	High
Flood prone land	Construction Access Insects Diseases	Very high Very high Very high Very high	Flooding	Very High
Industrial Production Zone	Air-borne pollution Water-borne pollution Noise pollution Crowds of workers	High/Low High Very high High	Gas leak/Explosion Epidemic	Very high High
Rubbish Dump	Air-borne pollution Water-borne pollution Insects Diseases	High/Low High Very high Very high	Methane/explosion Epidemic	Very High High
Railway Line	Air-brone pollution Noise pollution	Very high Very high	Crash Accident	Very high Very high
Main Road	Air-borne pollution Noise pollution	Very high Very high Very high	Crash Accident	Very high Very high
Footpath	Air-borne pollution Noise pollution	Very high Very high	Crash Accident	Very high Very high
Sewer	Water-borne pollution Insects Diseases	High High High	Gas leak/Explosion Epidemic	High High High

### Conclusion

It is evident from the preceding discussion that creation of space over water has produced some serious problems because of lack of comprehensive policies and planning programmes on the part of state and local governments. Such space creation has to be stopped immediately without further delay. Long term and short term programmes need to be taken up to curb and restrain such unplanned space creation by the people. In short we can say that rigorous actions need to be taken to decelerate the flow of millions of migrants towards Dhaka. Concurrently, steps should be taken to solve the housing problems of Dhaka and other problems having impact on housing.

Steps that need to be taken in this regard are as follows

- \* Decentralisation of activities and facilities to relieve the tremendous population pressure off Dhaka. The growth of Dhaka needs to be restrained by developing other cities and towns through integrated urbanisation and decentralisation policy.
- \* Encouraging decentralisation through creation of adequate employment and housing opportunities in other cities and towns of Bangladesh so that people can acquire jobs and housing in other urban and rural centres of the country.
- \* Consequently improving law and order situation and ensuring political stability so that investors look towards investing in other towns and cities.
- \* Encouraging the private sector to cater to the needs of the middle income and high-income groups, while the public sector should specifically cater for the low-income group.
- \* The public sector should take up schemes to provide low-cost core houses, sites and services schemes, walk-up row housing, tenement blocks, etc. to cater to the needs of the low-income group.
- \* Housing development in the public and private sector should conform to the development of physical and social infrastructure like, water supply, garbage disposal and sanitation, roads, electricity, gas, telephone, etc.
- \* Credit facilities should be extended to individuals and institutions remodeled to increase the housing stock as well as improve the quality of housing.
- \* In conjunction with increasing and improving housing, awareness should be created among the general masses about the importance of natural resources in a city. Steps should be taken to preserve and conserve these resources otherwise the remaining natural resources in Dhaka will soon be extinct.
- \* Some locations near water can be developed for housing with adequate services and also for recreation. Past trends of creating space for temporary accommodation to spend leisure time and recreation can be revived.
- \* Temporary housing and recreational spots along water resources have to be integrated with overall planning of the city and local area so that it does not create conflict with local planning and development. This type of development is evident all over the world and can be replicated in Dhaka and other cities.
- \* Legal actions have to be taken against people trying to destroy the natural resources of the city through deliberate actions.

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