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DECADAL CHANGE IN THE TRIBAL POPULATION OF JHARGRAM AND NAYAGRAM BLOCKS IN JHARGRAM DISTRICT FROM 1981 TO 2011

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Abstract: In terms of total population, tribal populations make up a sizable portion of the globe. Tribal people are roughly 5% of the world's population. However, they make up almost 15% of the world's poor (ILO, 2020). Tribal populations in India are diverse, reflecting the country's considerable ethnic diversity. In India, the tribal populations are dispersed unevenly. One of the largest tribal nations in the world is India (Ali & Das, 2003). According to the 2011 census, 10.45 million people, or 8.63 percent of the Indian population, are tribal (Paltasing & Paliwal, 2014). Out of a total population of 1135748, 333848 tribal people were found in the Jhargram district in the 2011 census report. Six major tribal groups comprise 29.37% of the tribal people of Jhargram district, which is the highest percentage of tribal people in West Bengal (Census of India, 2011). Through demographical study, we can estimate the change in the population in any region over time and space. Population change is closely related to population density, age-sex ratio, and population concentration. In this context, the study attempts to focus on the decadal change of tribal population density, tribal population concentration, and tribal sex composition in two blocks of the Jhargram district (Jhargram and Nayagram). We are considering both the spatial and temporal dimensions of the tribal population among two blocks in Jhargram district, explicitly and implicitly, for estimating decadal change. The concentration of people in a specific time and space is referred to as population density. It is one of the finest tools with which all other demographic attributes are directly or indirectly associated. Population growth determines the density distribution pattern and composition of the population (Ghosh, 1985). It is one of the simplest methods to establish a relationship between the population and natural resources. We can use population data to quantify demographic information and evaluate relationships with the ecosystem, human health, livability, and infrastructure. An account of tribal population density may be useful for understanding spatial aspects of demographic pattern as well as the overall development of the tribal people. The study also tries to assess the changing pattern of socio-cultural practices of diverse tribal groups among Jhargram and Nayagram blocks in Jhargram district on the basis of primary data.

Keywords- Demography, Population Density, Population Concentration, Sex Composition, Ethnic Diversity.

Introduction: It is estimated that there are 370 million indigenous people living on the surface of the earth across 70 countries (Paltasingh and Paliwal, 2014). It is noted that tribes are indigenous to parts of the Indian subcontinent because India is one of the largest tribal population countries in the world (Ali and Das, 2003). India is one of the largest tribal countries in the world (Ali & Das, 2003). India has a variety of tribal people, which reflects its significant ethnic diversity. The tribal peoples are unevenly distributed in India. In India, approximately 698 scheduled tribes constitute 8.6%, or 104 million people, of the total population (Ministry of Tribal Affairs, 2013). Tribal communities occupy approximately 15% of the country, living in a variety of ecological and geo-climatic conditions ranging from plains and forests to hills and inaccessible areas (Ambagudia, 2010). India is one of the largest tribal countries in the world (Ali & Das, 2003). India's tribal population is 10.45 core, accounting for 8.63 percent of the total population (Paltasing & Paliwal, 2014). Jhargram is one of the newly formed, highest tribally concentrated districts in West Bengal (2011 Census). Despite so many initiations and measures taken by the central and W.B. governments, the tribal peoples are still far behind in almost all the standard parameters of development. The tribal population residing in urban areas is very small in number because these people prefer to live in the remote areas, which are close to the natural environment. According to the 2011 census report, 33,848 tribal people lived in Jhargram district out of a total population of 113, 5748. Simultaneously, it was 44702 in Jhargram block and 56887 in Nayagram block. Tribal populations in Jhargram and Nayagram blocks change over time due to the influence of various factors. There are five indices like demographics, livability, accessibility, desirability, and developability that may be considered in understanding the population change in these blocks. We are considering both the spatial and temporal dimensions of the tribal population in these blocks of Jhargram district, both explicitly and implicitly. The concentration of people in a specific time and space is referred to as population density. It is one of the finest tools with which all other demographic attributes are directly or indirectly associated. Population growth determines the density distribution pattern and composition of the population (Ghosh, 1985). It is one of the simplest methods to establish a relationship between the population and natural resources. We can use population data to quantify demographic information and evaluate relationships with the ecosystem, human health, livability, and infrastructure. Population density-dependent limiting factors cause a population per capita growth rate to change, typically dropping with increasing population density. An account of tribal population density may be useful for understanding spatial aspects of demographic pattern as well as the

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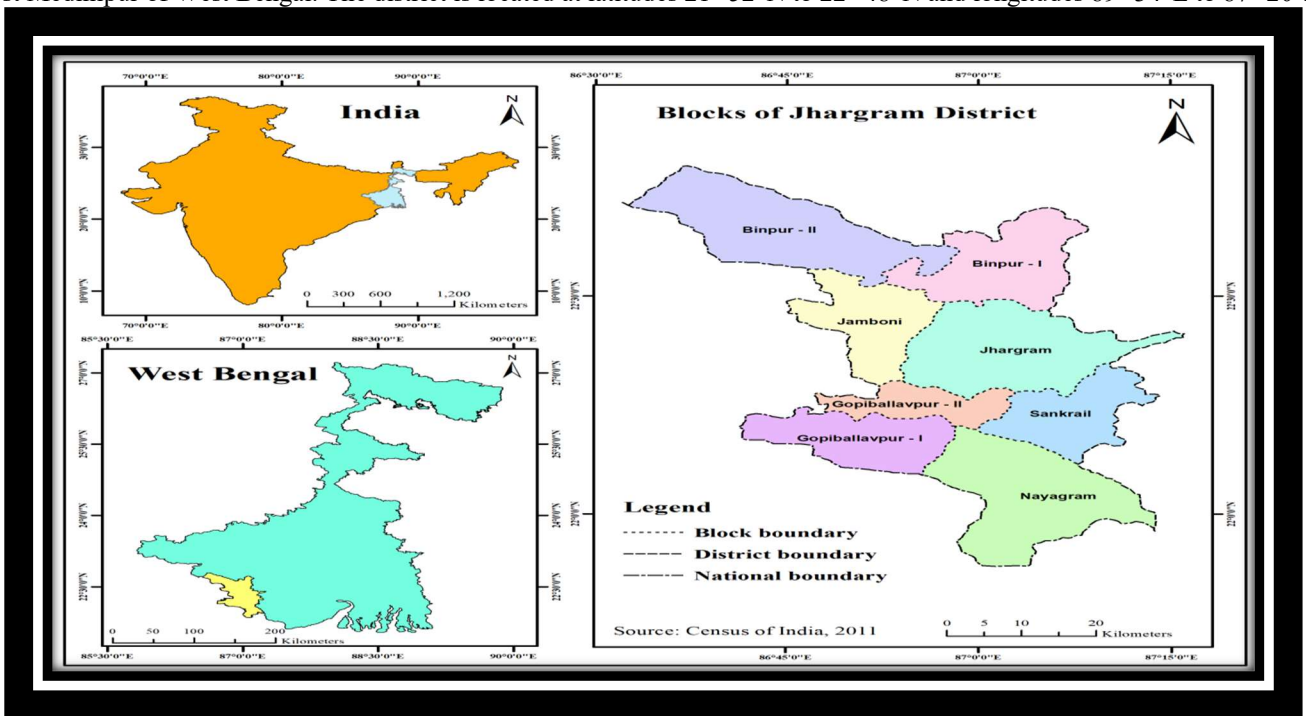
overall development of the tribal people. Therefore, the study of decadal change in respect to tribal people's density, concentration, and sex composition becomes very significant for socio-economic planning and execution at the village, block, as well as district level. We attempt to assess the change in socio-cultural practises among different tribal groups in Jhargram and Nayagram blocks in Jhargram district using a population census report and, secondarily, primary field survey data.

Back Ground of the Study Area: On April 4, 2017, Paschim Medinipur district was divided into two districts, namely Paschim Medinipur and Jhargram. Jhargram district is agriculturally dominant, drought-prone, and environmentally fragile in nature. It covers 3037.64 square kilometres with 10 police stations, 3 subdivisions—Belpahari, Gopiballavpur, and Jhargram Sadar; 8 community development blocks; 79-gram panchayats; 2996 mouzas; 2513 inhabited villages; 1 municipality (Jhargram); and 1 census town, Silda. The district headquarters is Jhargram. About 96.62% of people live in rural areas, and 3.48% live in urban areas. The district's share of SC and ST populations was 20.11% and 29.37%, respectively, of the total population. Jhargram is bounded on the north-west by Purulia; on the east by the East Singbhum district of Jharkhand; on the south-west by Orissa; on the north by Bankura; and on the east by West Medinipur of West Bengal. The district is located at latitudes 21° 52' N to 22° 48' N and longitudes 89° 34' E to 87° 20'.



Location Map of the Study Area

Objectives of the Study

a. To understand the pattern of decadal change of the tribal population in Jhargram and Nayagram blocks.
b. To throw light on the decadal changes in respect of tribal population density and sex ratio in Jhargram and Nayagram blocks.
c. To investigate decadal changes in tribal population density and gender ratio.

Database and Methodology

The present study is mainly based on secondary data, which will be gathered from various sources, such as the District Census Handbook, the District Statistical Handbook, the District Gazetteer, etc. Primary survey data and field observation are also being implemented to find out the socio-cultural practises and changes among different tribal groups of the Jhargram and Nayagram blocks through time. The data will be collected from the census handbook of Paschim Medinipur district in 1981, 1991, 2001, and 2011.

Next, the collected data is processed to measure the tribal population density and sex ratio of the Jhargram and Nayagram blocks. MS-Excel was applied to the processing and analysis of data. Various cartographic and statistical techniques are also used to represent the processed data. We can calculate the tribal population density by using the following formula:

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$$\text{Tribal Population Density} = \frac{\text{Total Tribal Population}}{\text{Total Geographical Area}}$$

The tribal sex composition or ratio is measured in terms of the number of females per thousand males.

Following formula use foe calculation:

$$\text{Tribal Sex Composition/Ratio} = \frac{\text{Total No.of Tribal Female}}{\text{Total No.of Tribal Male}} \times 1000$$

The index of concentration of tribal populations is also measured using the Location Quotient Method (Mahmood, 1977).

$$LQ = \frac{\text{No.of Tribal Population to total Population of a Block}}{\text{Total Tribal population of Disrict to toal Population of District}}$$

1. If the LQ value is above 1, the concentration of the tribal population is high.
2. If the LQ value is below 1, the concentration of the tribal population is low or disperses.
3. If the LQ value is equal to 1, the concentration of the tribal population is balanced.

In this study, we have considered over 30 years, from 1981 to 2011, for the analysis of the tribal population concentration in the different blocks of the Jhargram district.

Sampling Procedure

In the present study, a stratified random sampling technique will be adopted. The household survey was conducted in only two blocks out of eight blocks in the Jhargram district. According to the 2011 census report, these two blocks were selected based on the degree of concentration of tribal people. At first, the researcher grouped the blocks as "very high, high, medium, and low." According to the degree of concentration, two blocks were selected from four groups. The first one was Nayagram blocks (40.01%) from a very high degree of concentration group, and the second one was Jhargram blocks (22.71%) from a medium degree of concentration group.

Tribal population across Jhargram district on basis of degree of concentration

Degree of concentration	Name of the Blocks	Number of Blocks
Very High(>35%)	Nayagram & Binpur-II	2
High (25%-35%)	Binpur-I,Jamboni,Gopiballavpur-I& Gopiballavpur-II	4
Medium (15%-25%)	Jhargram & Sankrail	2
Low (<15%)		Nil

Source-2011 Census Report

To understand the pattern of decadal change in the tribal population in Jhargram and Nayagram blocks,

From Table No. 1, it is clear that the decadal change of the tribal population in Jhargram district varies from time to time and place to place and does not progress in a uniform pattern. The decadal change was observed in the Jhargram block from 1981 to 1991 (13.47%), 1991 to 2001 (26.26%), and 2001 to 2011 (10.65%). The decadal change was observed in the Nayagram block from 1981 to 1991 (22.94%), 1991 to 2001 (14.63%), and 2001 to 2011 (15.19%). So, it may be concluded that the highest decadal change observed in the Jhargram block from 2001 to 2011 was 26.26%.

Table No.-1: Decadal Change in Tribal Population Percentage of Jhargram &Nayagram Blocks in Jhargram District from 1981-2011.

Blocks	Schedule Tribe Population				Decadal Change in Tribal population (%)		
	1981	1991	2001	2011	1981-91	1991-01	2001-11
Jhargram	28199	31996	40398	44702	13.47	26.26	10.65

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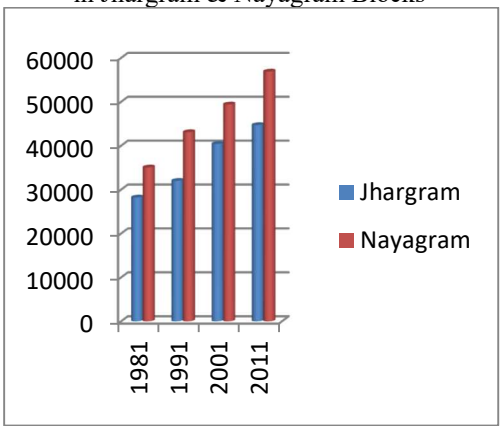
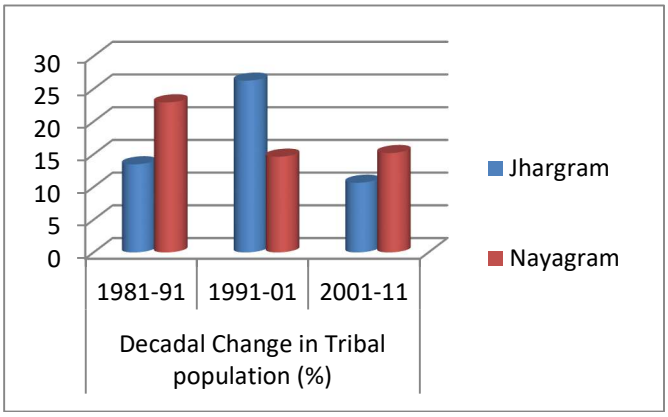
Nayagram	35046	43085	49387	56887	22.94	14.63	15.19
Jhargram D.	219469	263488	297531	327511	20.06	12.92	10.08

Source: Census of India, Census Handbook from-1981, 1991, 2001 & 2011.

Tribal Population Distribution from 1981-2011 in Jhargram & Nayagram Blocks



Decadal Change in Tribal Population from 1981-2011 In Jhargram & Nayagram Blocks



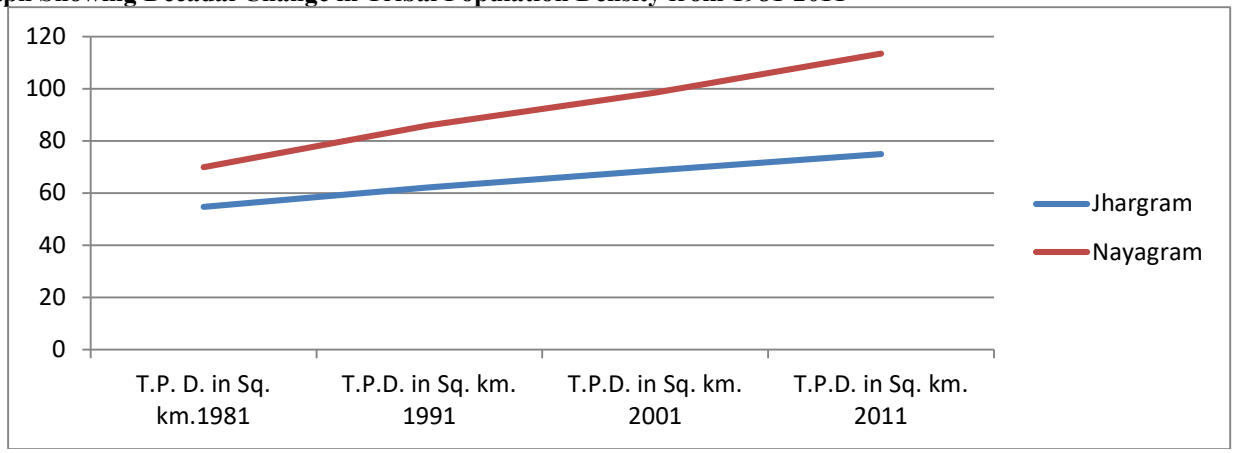
From Table No.-2, we try to discuss the decadal change in the tribal population density of the different blocks in Jhargram district from 1981 to 2011. In the Jhargram block, tribal population density was 54.74 people per sq. km. in 1981, which has been increased to 74.98 people per sq. km. in the last 50 years. In the Nayagram block, it has increased from 69.90 (1981) to 113.46 (2011) people per sq. km. Overall, tribal population density in Jhargram district increased from 72.25 (1991) to 107.82 (2011) per square km. It is also observed that in 2011, the highest tribal population density was found in Nayagram block (113.46).

Table No.-2: Changing Tribal Population Density (T.P.D.) of Jhargram & Nayagram Blocks from 1981-2011

Blocks	T.P. D. in Sq.km.1981	T.P.D. in Sq. km. 1991	T.P.D. in Sq. km. 2001	T.P.D. in Sq. km. 2011	Change T.P.D from 1981 to 2011
Jhargram	54.74	62.11	68.61	74.98	20.24
Nayagram	69.9	85.93	98.5	113.46	43.56
Jhargram District	72.25	86.74	97.97	107.82	44.55

Source: Census of India, Census Handbook from 1971,1981,1991,2001 & 2011.

Line Graph Showing Decadal Change in Tribal Population Density from 1981-2011



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From Table No. 3, we get a clear picture of the sex composition or ratio in the different blocks of Jhargram district from 1981 to 2011. Sex composition is an important instrument that helps to understand the socio-economic phenomena of fertility, mortality, migration, level of development, and the position of women in tribal society. We have identified three types of sex composition in the tribal population in Jhargram and Nayagram blocks of Jhargram district. In Jhargram block, it was 961 in 1981, which was increased to 1015 in 2011. In the Nayagram block, it was 992 in 1981, which was increased to 1002 in 2011. It is observed that the highest population density was found in the Jhargram block in 2011.

Table No.-3: Sex wise S.T. Population in Jhargram and Nayagram blocks

Block		1981	Sex Ratio	1991	Sex Ratio	2001	Sex Ratio	2011	Sex Ratio
Jhargram	M	14380	961	16337	958	20592	962	22190	1015
	F	13819		15659		19806		22512	
Nayagram	M	17832	965	21913	966	24932	981	28573	991
	F	17214		21172		24455		28314	
Jhargram District.	M	110170	992	133752	970	152187	982	166779	1002
	F	109299		129736		149901		167069	

Source: Census of India, Census Handbook from 1971,1981,1991,2001 & 2011.

Column Diagram Showing Block Wise Decadal Change of Sex Composition in Jhargram & Nayagram Blocks

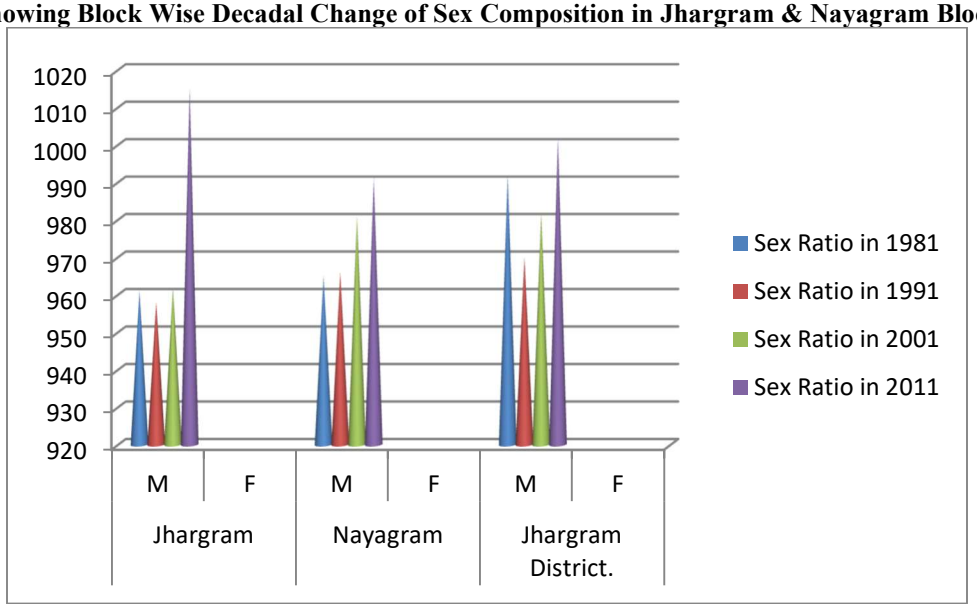

Table No.-4 It reveals that there are no wide variations in the concentration of tribal people among the Jhargram and Nayagram blocks of Jhargram district. From this table, we try to discuss the decadal change in tribal people's concentration in Jhargram and Nayagram blocks of Jhargram district from 1981 to 2011 with the help of the Location Quotient Index (LQI). The Location Quotient Index was high in the Nayagram block (1.36), but very low in Jhargram (0.66). In the Nayagram block, it was 1.30 in 1981, which was slowly increased in the next three decades, respectively, to 1.32 (1991), 1.33 (2001), and 1.36 (2011). In Jhargram, black slowly decreased in the next four decades to 0.67 (1981), 0.59 (1991), 0.65 (2001), and 0.66 in 2011.

Table No.-4: Location Quotient Index of Tribal Population of Jhargram and Nayagram Blocks in Jhargram District from 1971-2011

Name of the Blocks	1981	1991	2001	2011
Jhargram	0.67	0.59	0.65	0.66
Nayagram	1.3	1.32	1.33	1.36

Source: Census of India, Census Handbook from 1981, 1991, 2001 & 2011.

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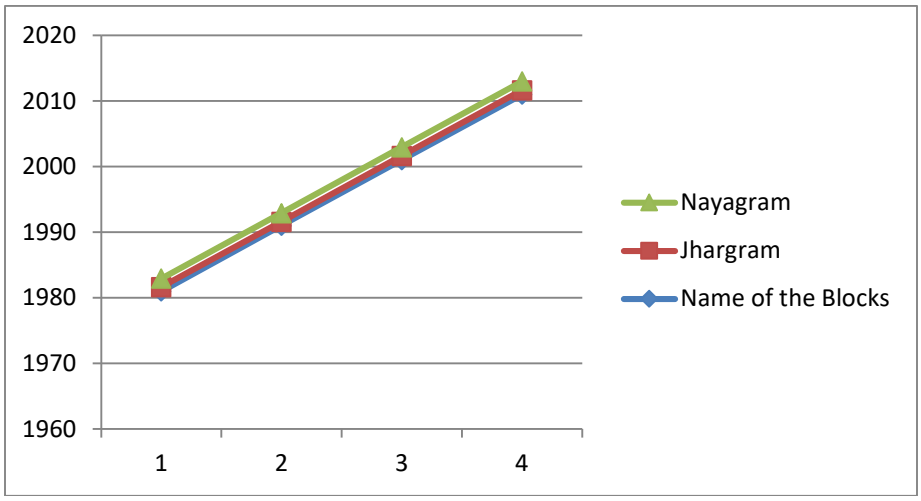
Line Graph Showing Location Quotient Index of Tribal Population of Jhargram and Nayagram Blocks in Jhargram District from 1971-2011



Concluding Remarks

The demographic characteristics of Jhargram and Nayagram blocks of Jhargram district are related to so many factors. These are tribal population density, spatio-temporal distribution of tribal people, tribal population concentration, tribal sex composition, educational attainment of the tribal people, migration, tribal family characteristics, etc. Indices such as livability, accessibility, desirability, livability, and developability, among others, are strongly related to decadal changes in tribal population density, tribal population concentration, and tribal sex composition in the various blocks as well as in the Jhargram district. We try to analyse specifically and generally how different types of factors influence block level population growth and decadal change in tribal population density, concentration, and sex composition in Jhargram district from 1981 to 2011. To conduct a scientific analysis of the spatiotemporal distribution, density, concentration, and sex composition among the tribal people of Jhargram and Nayagram blocks in Jhargram district, it is necessary to consider the political and cultural context as well as environmental constraining and facilitating forces.

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