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### RESEARCH ARTICLE

## VAGUE GRAVITATIONAL FORCES IN THE CONVENTIONAL SWIMMING POOLS

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 Force.

### Abstract

The swimmers while swim in the swimming pools are not facing identical and constant environment, where they could perform according to their intrinsic worth or merits. These swimmers are facing vague gravitational forces, which prove advantageous to some and disadvantageous for others depending upon their swimming lane positions in the conventional swimming pools while swimming. This study is based on scientific principles of gravitational physics and the behavior of gravitational forces in the water bodies. These gravitational forces become vague because they affect the swimmers in different degrees of magnitude depending upon the swimmers position in the conventional swimming pools. How to remove these vague gravitational forces, which affect the swimmers while swimming in the swimming pools? Why to change from ETSP (Existing Type Swimming Pools) to NTSP (New Type Swimming Pools). There is definitely a need to change so that all the swimmers could be given equal opportunity against these vague gravitational forces while competing in the swimming pools. This study gives the clear idea to understand these vague gravitational forces which affects the performance of some swimmers in the swimming pools. These VGF (vague gravitational forces) in the swimming pools are not equally advantageous or disadvantageous to the swimmers, because the VGF have an effect upon the movement of the swimmer with myriad degrees of magnitude. The affect of these VGF vary differently from one swimmer to another during swimming competition. These gravitational forces which are vague in nature thus influence the capability of the swimmer and gives wrong results in selection while choosing the champions.

So to provide equal opportunity and constant environment within the waters of swimming pool, we have to shift from ETSP (Existing Type Swimming Pool) to NTSP (New Type Swimming Pool). The NTSP (New Type Swimming Pool) will provide equal opportunity and constant environment to the swimmers while competing with their counterparts.

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This study was carried out so that the equal opportunity is to be provided to the swimmers worldwide, while facing swimming competitions. The swimmers who take part in various competitions in different swimming pools nationally or internationally are not being provided equal opportunity or equivalent platform, among them while swimming with their competitors in the ETSP (Existing Type Swimming Pools). Due to unrevealed facts of the principles of gravitational science, **the organizers of the water sports events does not provide the platform where the competitors of water sport especially swimmers are given equal opportunity before these vague gravitational forces.** All the swimming events that have and or being taking place in various swimming pools have

not provided the platform which is based on principal of equality & justice to the swimmers, as far as the gravitational magnetic field in the swimming pools is concerned. The entire swimming events which have been executed and are being executing in the swimming pools have given wrong results on which the champions are being selected. This is because the gravitational science is not being put into practice.

### Gravitational Forces in the water bodies:-

Water bodies behave in a different way to the gravitational forces relatively opposite to the earth & sun. The water molecule has repulsive force towards the outer layers like air. The water and air behaves alike against the gravitational forces.

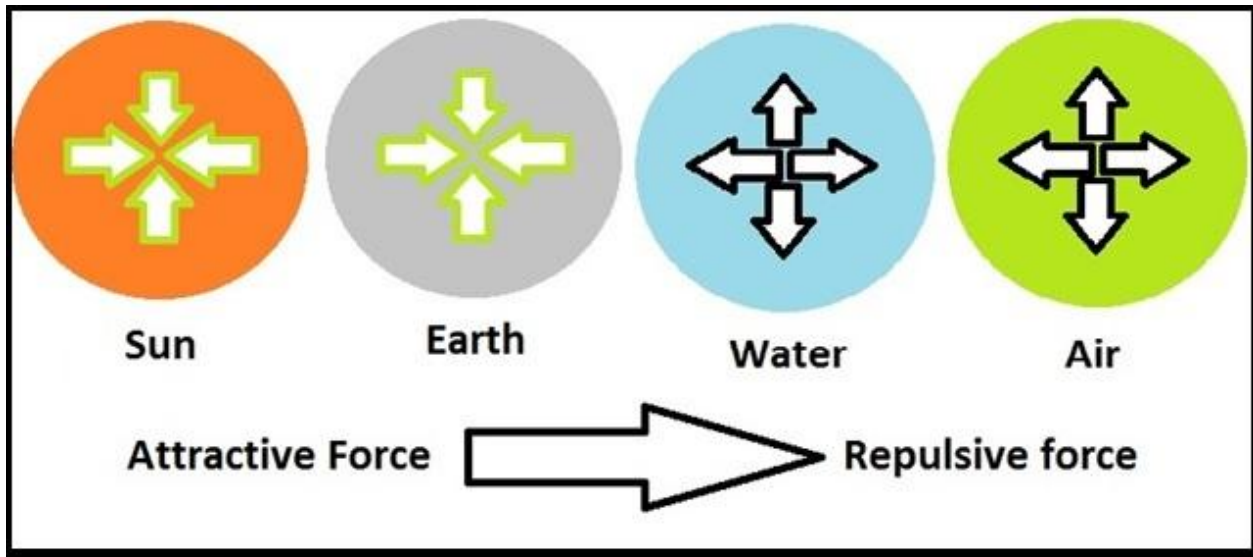


Figure shows behaviour of gravitational forces in sun, earth, water & sun.

### The behavior of gravitational force within water in the ETSP (Existing type swimming pool):-

The water in the ETSP (Existing Type Swimming Pool) comes into the vague gravitational forces. The degree of gravitational force varies from the centre or midpoint of ETSP (Existing Type Swimming Pools) up to the boundary walls. **One cannot have regular or leveled gravitational force inside the ETSP (Existing Type Swimming Pools). It is this vague and irregular gravitational force, which gives advantage to some of the swimmers and disadvantage to others.** This vague and irregular gravitational force in the swimming pools does not give us the clear results of good performance and bad performance among the competitors. The unempirical and unscientific result gives us often unfair performers as champions in this sport.

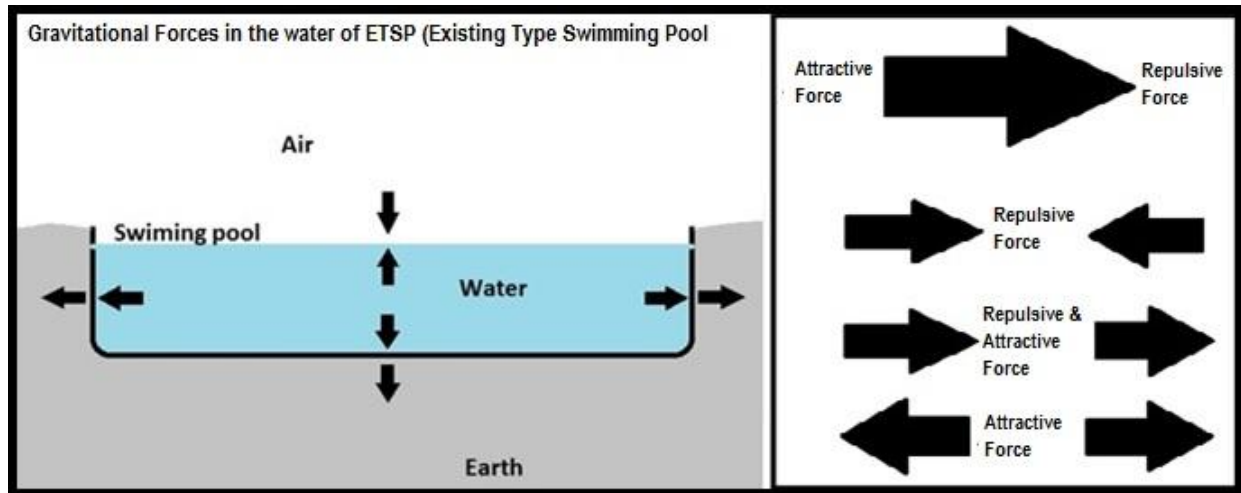


Figure shows the various gravitational forces in the water and on the earth around swimming pool

The above figure shows the various gravitational forces between earth and the water. There are three types of gravitational forces found in the universe, these are:

1. **Repulsive Force:** The force which pushes each other. This type of gravitational force is between air and the water, because both are having repulsive force towards outer layer.
2. **Repulsive and Attractive Force:** There are two types of forces in it. One force pushes and another force pulls in between. This is unique gravitational force found in between the water and the earth. This gravitational force is vague in nature which is neither fully attractive nor fully repulsive.
3. **Attractive Force:** This force pulls in between. This type of gravitational force is in between all the heavenly bodies in the solar system. This force is in between the earth and the sun. It is this gravitational force which keeps the earth and other heavenly bodies in their elliptical orbit around the sun.

The water in the ETSP (Existing Type Swimming Pool) is having dissimilar and irregular gravitational forces on each side of the swimming pool. The degree of these gravitational forces varies from middle of the swimming pool up to the boundary walls & edges of the swimming pool. The vague & irregular gravitational forces in ETSP (Existing Type Swimming Pools) affect the swimmers accordingly. These vague gravitational forces prove advantageous to some and disadvantageous for the other swimmers. **The beneath and the sides of the swimming pool are having repulsive and attractive forces, which pushes the swimmer towards the edges, boundary walls and underside surface of the ETSP (Existing Type Swimming pool).** Between the air and the water there is repulsive force and in the centre of the swimming pool in between the water there is an attractive force. The degree of these forces varies from one point to another point in the ETSP (Existing Type Swimming Pool). The swimmer who swims in the swimming lane near to the boundary walls or edges of the swimming pool will be having enormous gravitational forces upon them, in contrary to the swimmers who swim in the middle of the swimming pool.

**Image of ETSP (Existing Type Swimming Pool) & its calculated gravitational force:-**

1	2	3	4	5	6	7	8	9
9	8	7	6	5	6	7	8	9
8	7	6	5	4	5	6	7	8
7	6	5	4	3	4	5	6	7
6	5	4	3	2	3	4	5	6
5	4	3	2	1	2	3	4	5
6	5	4	3	2	3	4	5	6
7	6	5	4	3	4	5	6	7
8	7	6	5	4	5	6	7	8
9	8	7	6	5	6	7	8	9
<b>65</b>	<b>56</b>	<b>47</b>	<b>38</b>	<b>29</b>	<b>38</b>	<b>47</b>	<b>56</b>	<b>65</b>

The above figure shows the graphical image of ETSP (Existing Type Swimming Pool), which is having nine swimming lanes for the swimmers. The calculated degrees of gravitational force are mentioned in each lane at the bottom of the image. The middle lane number 5 is having total of 29 degrees of calculated gravitational forces from one end to another end of the lane in ETSP. In the centre of the ETSP (Existing Type Swimming Pool) there is small amount of gravitational force in contrary to the other positional points of the ETSP. In the middle of the swimming pool there is only repulsive and attractive force towards the bottom of the pool. **As the swimmer moves from the center of the pool towards any direction in the swimming pool, the increasing degree of gravitational force affects his or her body movements. The degree of gravitational force increases, when the swimmer swims towards the edges or boundaries of the swimming pool.** If the swimmer is affected one degree of gravitational force in the centre of the ETSP (Existing Type Swimming Pool) as shown in the above figure, the swimmers movement towards any corner from the middle of the ETSP (Existing Type Swimming Pool) increases the gravitational force which affects upon him will be 9 degree, the 8 degrees addition in contrary to the gravitational force of the midpoint of the swimming pool, because these additional 8 degrees of gravitational force upon his or her body would be from the two sides walls of each corner in the ETSP (Existing Type Swimming Pool). This is the

vague repulsive and attractive force which affects the swimming capability of the swimmer as compared to his or her counterpart who is swimming in the middle lane of the swimming pool.

Figure shows ETSP (Existing Type Swimming Pool) and It's various stages and the degree of gravitational force in each lane.

	1	2	3	4	5	6	7	8	9
	A	B	C	D	E	F	G	H	I
Stage 1	9	8	7	6	5	6	7	8	9
Stage 2	8	7	6	5	4	5	6	7	8
Stage 3	7	6	5	4	3	4	5	6	7
Stage 4	6	5	4	3	2	3	4	5	6
Stage 5	5	4	3	2	1	2	3	4	5
Stage 6	6	5	4	3	2	3	4	5	6
Stage 7	7	6	5	4	3	4	5	6	7
Stage 8	8	7	6	5	4	5	6	7	8
Stage 9	9	8	7	6	5	6	7	8	9
	J	K	L	M	N	O	P	Q	R
	1	2	3	4	5	6	7	8	9
<b>Cumulative Gravitational Force</b>									
	65	56	47	38	29	38	47	56	65

The swimmers when start swimming suddenly came into the force of gravitation. The swimmer swimming at lane 1 will be having 9 degree of gravitational force upon his or her body. The swimmer at lane 2 will be having 8 degrees, lane 3 will be having 7 degrees, lane 4 will be having 6 degrees, lane 5 will be having 5 degrees, lane 6 will be having 6 degrees, lane 7 will be having 7 degrees, lane 8 will be having 8 degrees and lance 9 will be having 9 degrees shown in the above depicted image. Soon the swimmers swim towards stage 2 of the swimming pool each one of them will be losing one degree of gravitational force equally. This one degree losing will be because of shifting from stage 1 to stage 2 of the swimming pool. The swimmer when reaches the stage 5 will come to the minimum level in degrees of gravitational force upon their body. After crossing the middle line of swimming pool the gravitational force again increases as they cross the stages up to the last stage 9 of the swimming pool, where each swimmer will be having again highest affected degrees of gravitational force upon their body. The single trip of each swimmer from one end to another end of swimming pool will be having cumulative gravitational force affected upon their body while completing one swimming trip. This is depicted against each swimming lane at the bottom of the above figure, which shows the swimmer swims in middle of the swimming pool will be having advantage of gravitational forces & the swimmers swims in other lanes especially lane 1 and lane 9 are having equally disadvantage of vague gravitational forces while swimming, because they remain always under the vague gravitational forces of the side wall of the swimming pool. Similarly the swimmers at lane 2 and 8 will be having < 1 degree affect their body while swimming. Lane 3 and 7 will be having < 2 degree affect upon their body as compared to lane 1 and 9. Same way lane 4 and 6 will be having < 3 degree affect upon their body as compared to lance 1 and 9 in the ETSP. The swimmer who swims in the middle lane which is lance 5 will be having less affect of gravitational force upon his or her body while swimming in comparatively to all his or her counterparts.



**Image of ETSP (Existing Type Swimming Pool) showing Gravitational force at different points**

LANE 1	LANE 2	LANE 3	LANE 4	LANE 5	LANE 6	LANE 7	LANE 8	LANE 9
A1	B2	C3	D4	E5	F6	G7	H8	I9
9	8	7	6	5	6	7	8	9
8	7	6	5	4	5	6	7	8
7	6	5	4	3	4	5	6	7
6	5	4	3	2	3	4	5	6
5	4	3	2	1	2	3	4	5
6	5	4	3	2	3	4	5	6
7	6	5	4	3	4	5	6	7
8	7	6	5	4	5	6	7	8
9	8	7	6	5	6	7	8	9
J1	K2	L3	M4	N5	O6	P7	Q8	R9
65	56	47	38	29	38	47	56	65

A swimmer who swims in the centre lane number five of the ETSP (Existing Type Swimming Pool) will be having total of 29 degrees of affected cumulative gravitational force upon his or her body while swimming one trip from e5 to n5, whereas on the other hand the swimmers who swim in the lane 1 and lane 9 will be having 65 degrees of cumulative gravitational force each upon their body while swimming one trip from point a1 to j1 and i9 to r9 respectively. In other words the swimmers who swim in lane 1 and lane 9 will be having additional 36 degree of cumulative gravitational force upon their body each, than the swimmer who swims in lane 5. From the centre lane 5 towards each side of right and left of the swimming pool the additional increase of 9 degree of cumulative gravitational force is add on up to the boundary walls of the swimming pool of each side. The cumulative gravitational force is the total gravitational force of each lane from one end to another end of the pool. This gravitational force is advantageous to the swimmer who swims in the middle of the swimming pool, because when he or she starts swimming from point e5 to n5, it has only one sided attractive and repulsive force upon his or her body. This makes the swimmers move faster, than the swimmers who swims in swimming lane of 1 and 9, because the swimmers who swims in these two lanes have two sided gravitational forces upon their body which holds back

the swimmers and prove disadvantageous for them while swimming from point a1 to j1 and i9 to r9 respectively. Gravitational force proves advantageous to the swimmer who swims in centre lane of the ETSP (Existing Type Swimming Pool). The degree of cumulative gravitational force goes on add depending upon the trips of the swimmers from one end to another end of the swimming pool. If each trip of a swimmer who swims in the middle lane no 5 is having 29 degrees of cumulative gravitational force upon his or her body, then the other swimmers who swim in lane no 1 and 9 will be having 65 degrees in each trip respectively. The 36 degree cumulative gravitation force more than the swimmer who swims in the centre of the swimming lane number 5. The other swimming lanes right and left from the centre lane no 5 of ETSP will be adding 9 degrees cumulative gravitational force each to the lanes up to the boundary wall of the swimming pool.

**Image shows the finishing point of first trip in ETSP (Existing Type Swimming Pool).**

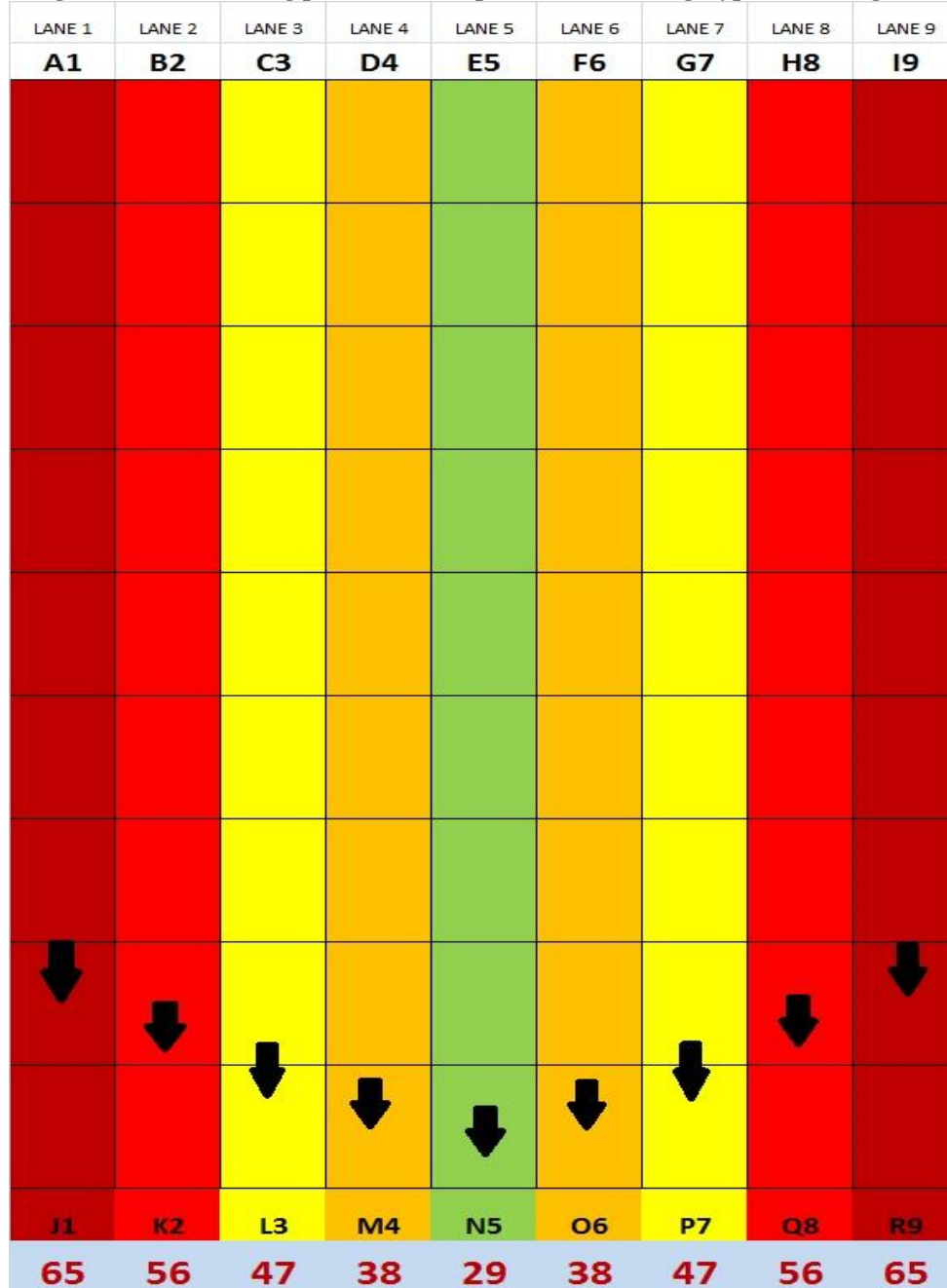




Image shows the finishing point of second reverse trip in ETSP (Existing Type Swimming Pool).

LANE 1	LANE 2	LANE 3	LANE 4	LANE 5	LANE 6	LANE 7	LANE 8	LANE 9
A1	B2	C3	D4	E5	F6	G7	H8	I9
				↑				
	↑	↑	↑		↑	↑	↑	
↑								↑
J1	K2	L3	M4	N5	O6	P7	Q8	R9
65	56	47	38	29	38	47	56	65

Image shows the finishing point of third trip in the ETSP (Existing Type Swimming Pool).

LANE 1	LANE 2	LANE 3	LANE 4	LANE 5	LANE 6	LANE 7	LANE 8	LANE 9
A1	B2	C3	D4	E5	F6	G7	H8	I9
↓								↓
	↓						↓	
		↓				↓		
			↓		↓			
				↓				
J1	K2	L3	M4	N5	O6	P7	Q8	R9
65	56	47	38	29	38	47	56	65

The arrow gets sharper after finishing of each trip by the swimmers in the ETSP (Existing Type Swimming Pool). It is because of vague gravitational force in the swimming pool, which prove advantageous to some swimmers who swim in the middle of the ETSP (Existing Type Swimming Pool) and disadvantageous to other swimmers, while

swimming for competition. **If the ETSP (Existing Type Swimming Pool) is big one having 10 to 15 swimming lanes, the swimmers who swims in the middle lane is more advantageous than the swimmer who performs in narrow swimming pool having 4 to 5 swimming lanes only. Because the gravitational forces in the middle of the large swimming pool is having very less affect upon the swimmers body. The swimmer swimming in the middle lane is having advantage upon the swimmers who swims near the boundary wall of the ETSP (Existing Type Swimming Pool).** The swimmer in middle lane is more smooth and without any odd forces of gravitational force upon his or her body while swimming. And the swimmers who swim near the boundary walls of the swimming pool are facing greater influence of vague gravitation force upon their body while swimming. The influence of gravitational force proved disadvantages to the swimmers who swim near the boundary walls of the ETSP (Existing Type Swimming Pool). **If the swimming pool is narrow having four to five lanes the degree of advantage and disadvantage among the swimmers is less as compared to the large swimming pools which are having 10 to 15 swimming lanes.**

If swimming is compared with the athletics, one can see the difference because of the gravitational forces in the swimming pools. One cannot find the making of image like arrow type at finishing line in the athletic sport.

**Solution:-**

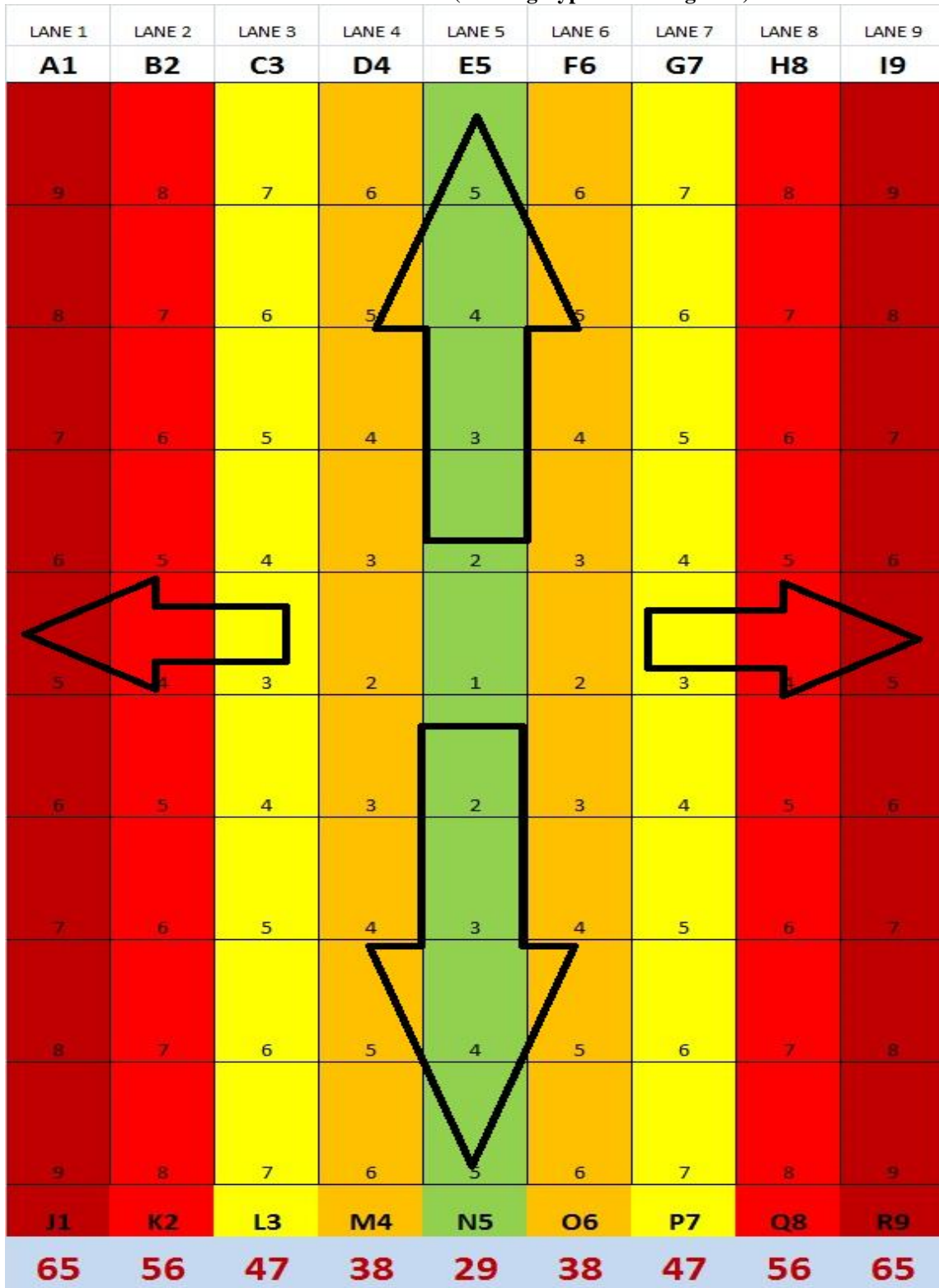
To counter the vague gravitational forces in the swimming pool, the water in the swimming pool should be divided into the lanes. The disturbed water of one lane should not disturb the water of another lane. Where the water is distributed in the separate lanes, each lane will be having its own gravitational poles. This divided water in different lanes will provide equal gravitational force upon each swimmer in the swimming pool. The equal gravitational force will provide equal opportunity to the competitors scientifically.

**NTSP (New Type Swimming Pool):-**

LANE 1	LANE 2	LANE 3	LANE 4	LANE 5	LANE 6	LANE 7	LANE 8	LANE 9
A1	B2	C3	D4	E5	F6	G7	H8	I9
5	5	5	5	5	5	5	5	5
4	4	4	4	4	4	4	4	4
3	3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
J1	K2	L3	M4	N5	O6	P7	Q8	R9
29	29	29	29	29	29	29	29	29

The above figure shows equal gravitational force in each swimming lane from lane 1 to lane 9. Here every lane is water tight compartment. The small movement of water in one compartment does not affect the water of other compartment in this NTSP (New Type Swimming Pool), because the gravitation force is equally distributed among the nine swimming lanes in the NTSP (New Type Swimming Pool).

Gravitation forces in ETSP (Existing Type Swimming Pool).

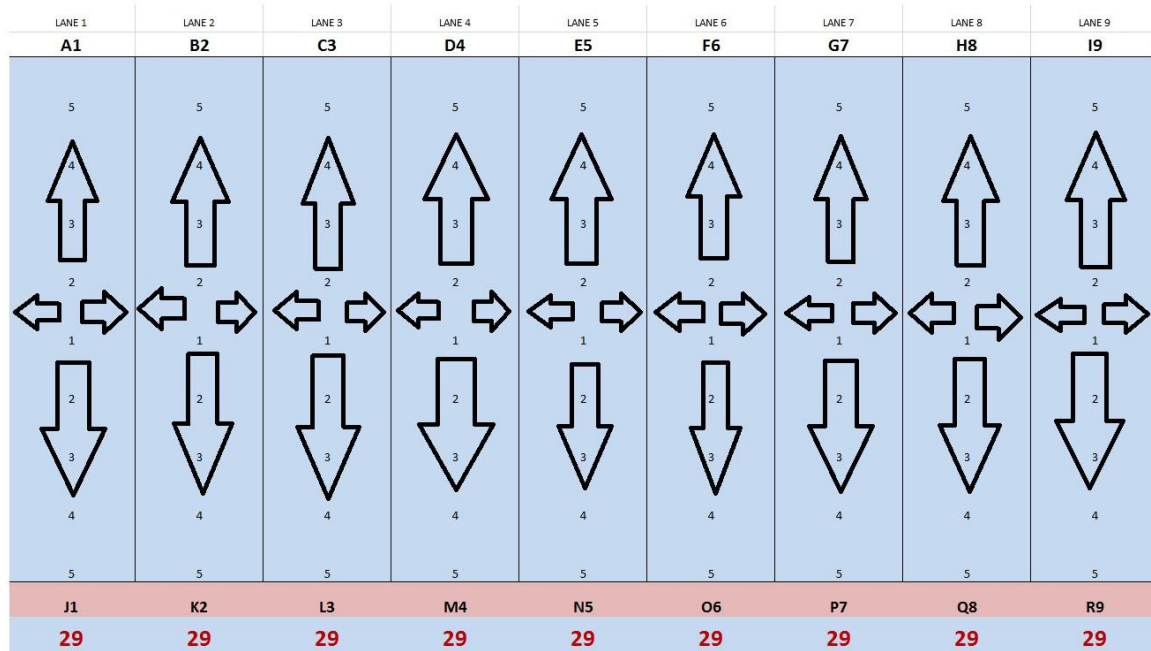


Gravitational forces in ETSP (Existing Type Swimming Pool) as has been shown in the above figure. The water in the centre of swimming pool is having attractive force and the water at the outer walls of the swimming pool is

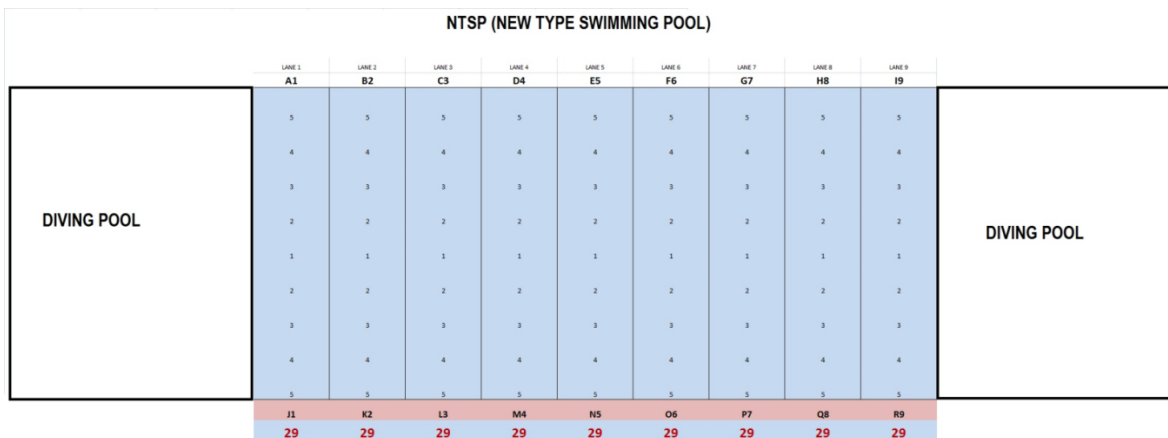
having repulsive force. This gravitational force became advantageous for the swimmers who swim in the middle and disadvantageous to others who swim in the corners of the ETSP.

**Gravitational forces in NTSP (New Type Swimming Pool).**

**NTSP (New Type Swimming Pool)**



The NTSP (New Type Swimming Pool) as depicted above shows the gravitational force divided equally in the swimming lanes. Each swimming lane will be having equal gravitation force, because the swimming lanes will be water tight compartments. There will be no link between the waters in water tight compartments or swimming lanes in NTSP (New Type Swimming Pool). The disturbance of water in one lane does not have any effect on the water of other lane in the NTSP (New Type Swimming Pool). The equal distribution of water in the water tight compartments of NTSP (New Type Swimming POOL) will be having equal gravitational force, which will have equal effect upon the swimmers while swimming in the NTSP (New Type Swimming Pool).



**EQUAL CUMULATIVE GRAVITATIONAL FORCE IN EACH SWIMMING LANE**

The NTSP (New Type Swimming Pool) will be having the diving pools on right and left of the swimming pool. This will scientifically eliminate the vague gravitational forces completely. The compartments where the swimming takes place will be water tight. This distribution of water in NTSP (New Type Swimming Pool) will be having equal gravitational repulsive and attractive force in each compartment. This will provide equitable swimming platform for all the swimmers to compete with their opponents.