

# Institutions and Human Behavior Characteristic of the Horse Racing Industrial Complex

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## Introduction

In *Theory of the Leisure Class* (1899), Thorstein Veblen wrote of certain barbaric traits and practices that survive the test of time. Sometimes they are ceremonial at other times they are not.

Veblen observes:

A distinction is still habitually made between industrial and non-industrial occupations; and this modern distinction is a transmuted form of the barbarian distinction between exploit and drudgery. (Veblen, 1899: 26)

Veblen goes further with his acerbic sarcasm in unmasking a specific barbarian trait in one of the most esteemed professionals of modern times:

The lawyer is exclusively occupied with the details of predatory fraud, either in achieving or in checkmating chicanery, and success in the profession is therefore accepted as marking a large endowment of that barbarian astuteness which has always commanded men's respect and fear. (Veblen, 1899: 156)

Be that as it may, they remain recognizable in form even if they serve an altogether different purpose. This shift may indicate a substantial modification of their content in addition to, and in tune with their renewed underlying motive. Moving ahead from a specific question, Karl Polanyi drew his general lesson concerning the survival of institutions forcefully:

The question was raised: what enabled the feudal aristocracy of the Continent to maintain their sway in the middle-class state once they had shed the military, judicial, and administrative functions to which they owed their ascendancy? The theory of “survivals” was sometimes adduced as an explanation, according to which functionless institutions or traits may continue to exist by virtue of inertia. Yet it would be truer to say that no institution ever survives its function—when it appears to do so, it is because it serves in some other function, or functions, which *need not include the original one*. (Polanyi, 1944: 183)

Horse racing is one such practice. Far from disappearing in the wake of modernity, it has in fact developed into a complex industry with affiliate sectors such as betting that generate considerable profits for a significant number of stakeholders. One can draw a parallel with the once Amsterdam Stock Exchange characteristic of early modernity that penetrated right from the highest echelons of business well into the local populace. Fernand Braudel, the eminent historian of the early modern period wrote of the Amsterdam Stock exchange of the seventeenth century:

But what was new in Amsterdam was the volume, the fluidity of the market and the publicity it received, and the speculative freedom of transactions. Frenetic gambling went on here—gaming for gaming’s sake; we should not forget that in about 1634, the tulip mania sweeping through Holland meant that a bulb ‘of no intrinsic value’ might be exchanged for ‘a new carriage, two grey horses and a complete harness’! (Braudel, 1982: 101)

It was not only the expansion of speculation beyond all rational expectations that commanded Braudel’s attention. Far more important was the involvement of people from all walks of life. The analogy he draws is worthy of our attention:

The explanation for the volume and notoriety of speculation in Amsterdam, which was relatively spectacular at first, was that small shareholders had always been associated with it, not just the big capitalists. Indeed one is sometimes reminded of present-day betting-shops or the *tierce* in France. ‘Our speculators’ says Joseph de la Vega in 1688, ‘frequent certain houses in which a drink is sold which the Dutch call *coffy* and the Levantines *caffè*’. (Braudel, 1982: 103)

A parallel can also be drawn with similar traditional practices such as dogfighting and cockfighting that have survived albeit in a more modest scale with their ancillary betting. One would have expected horse racing to have been surpassed by auto racing; a novel attraction representative of modern industry, yet this did not happen. From a different viewpoint, betting component of horse racing industrial complex can be associated with gambling. Yet it has generated specific peculiarities of its own that distinguish it from traditional gambling practices such as roulette playing and lottery. The objective of this paper is to identify the root causes of the comparative advantage of horse racing industry over its rivals as an institution, particularly

successful in survival through adaptation. We will explore analytically the specific interaction of institutions, uncertainty, information, tacit knowledge, learning, economic rationality, and strategic behavior that help maintain this industry in new clothing. The motive here is as much to understand the way horse racing industry works as it is to gain new insights into the dynamics of time-constrained strategic agency decision-making in a context plagued with uncertainty where incremental knowledge differentials can produce significant earning consequences.

The underlying assumptions of mainstream economic theory concerning human behavior are tenuous at best. They have been much contested in the course of the past century. Institutional Economics and Austrian Economics have taken the lead in this challenge. Complementary in some respects, both schools have successfully resisted the temptation to succumb to the mainstream. Far from doing so, they have sharpened their criticisms through further elaboration of human behavior in the course of time. This work has entailed two complementary dimensions. First is the reworking of agency behavior. Second is the treatment of such behavior in relation with institutions that had for long been assumed away by mainstream economics. Institutional Economics has gone further than Austrian Economics in incorporating seemingly ‘external factors’ into its domain of analysis. Furthermore, it has surpassed its neighbor insofar as consistently treating markets themselves as institutions. The combined success and effectiveness of these two approaches is best manifested in the reaction of the mainstream. If neoclassical economics has responded by differentiating itself from textbook mainstream economics by enriching itself and expanding its domain via New Institutional Economics, this is because it has been forced to take the challenge seriously.

The assumptions characteristic of mainstream economic approach to human behavior concern the three tenets of neoclassical economics, that is, certainty, omniscience (perfect knowledge) and rationality. In accordance, the economic world is modelled as one of certainty where economic agents possess full knowledge which they process in an ideally rational manner. It is no coincidence that in this paper we choose to expose the critical concepts of uncertainty, knowledge and rationality to the litmus test of the horse racing industrial complex. Not only do we think that these concepts offer us convenient tools for approaching this case, but also we suspect that these concepts can be cast in a new light by virtue of the lessons of this specific industrial context. This exercise will be suggestive of a different a conception of human behavior and

institutions than that taken for granted by neoclassical economists. We also take up an analysis of gambling because it is inextricably linked to complex issues of great importance that are serviceable to the further understanding of human behavior.

The basic classificatory scheme of economic activities as conceived by standard economics consists of production, consumption, investment and saving. The delineation of these activities is for the sake of convenience and there are times when certain economic activities concentrate in the grey-zones among these categories. For example, it is quite difficult to classify gambling as either consumption or investment. A gambler could bet \$5 on a horse and get ‘utility’ from this choice irrespectively of whether the horse wins the race or loses. Thanks to the horse, if he wins, the picture gets all the more complicated as he gets both utility and profit, whereas in principle, moneymaking should come with sweat and tear and subsequently consumption should give utility. A gambler, in addition to enjoying the act of gambling, also tries to predict which horse will win and make money out of it. In case he fails to predict the winner correctly, he can bet another \$5 and if he is right this time, he can win much more than he has lost in the preceding stages. Be that as it may, we cannot ignore the sheer pleasure he takes in watching the winning-horse. These different aspects of the same act can overlap and be observed simultaneously in the gambler’s course (Ignatin and Smith, 1976).

Gambling is crucial from the viewpoint of the horse racing industrial complex. Yet one can contend that it is marginal to economics; it can be assumed away for the sake of simplification in economic analysis of behavioral motives. When approached from the macroeconomic point of view, however, gambling associated with the horse racing industrial complex is far from insignificant. . Table 1 shows the sum of 41 countries’ horse racing betting turnover is 94 billion euros which is approximately equal to Slovakia’s nominal GDP in 2012. Let us note in passing that this figure is higher than the GNP of 100 countries including Croatia (57 billion), Luxemburg (56 billion) and Bulgaria (51 billion). And yet, this is only legal horse racing betting. Obviously there are many more betting games not to mention gambling activities, legal or otherwise. We are faced here with the tip of the iceberg that reminds one of the informal sector that is also conveniently overlooked by economists of a mainstream posture.

	Country	Betting Turnover (Euros)	Returned to Customers	Received by Government	Retained by Betting Organization	Returned to Racing		Country	Betting Turnover (Euros)	Returned to Customers	Received by Government	Retained by Betting Organization	Returned to Racing
1	JAPAN	27.087.372.451	75%	9%	11%	5%	22	MALAYSIA	195.776.694	79%	12%	9%	0%
2	GREAT BRITAIN	11.641.233.193	87%	1%	7%	1%	23	BELGIUM	171.090.000	31%	11%	3%	38%
3	AUSTRALIA	11.299.633.610	87%	3%	7%	3%	24	BRAZIL	165.946.939	70%	1%	0%	0%
4	FRANCE	9.955.922.932	75%	10%	5%	9%	25	VENEZUELA	155.799.966	40%	39%	8%	13%
5	HONG KONG	9.347.686.966	84%	12%	0%	0%	26	MAURITIUS	135.917.627	75%	9%	11%	5%
6	USA	8.410.262.520	-	-	-	-	27	SWITZERLAND	91.724.040	75%	8%	0%	1%
7	KOREA	4.521.496.857	73%	16%	0%	11%	28	GERMANY	91.190.602	44%	0%	6%	0%
8	IRELAND	2.849.253.932	92%	1%	0%	2%	29	GREECE	84.387.798	89%	1%	4%	3%
9	SWEDEN	1.393.693.084	70%	-	-	-	30	CYPRUS	61.196.671	70%	3%	0%	26%
10	<b>TURKEY</b>	<b>1.208.189.270</b>	<b>50%</b>	<b>28%</b>	<b>12%</b>	<b>9%</b>	31	PANAMA	30.948.401	67%	3%	0%	0%
11	CANADA	1.020.611.634	76%	6%	17%	0%	32	PERU	26.651.267	68%	0%	0%	0%
12	ITALY	1.012.073.321	70%	5%	12%	14%	33	NETHERLANDS	25.142.378	75%	-	-	-
13	SINGAPORE	976.104.432	78%	5%	16%	0%	34	URUGUAY	23.484.368	73%	-	-	-
14	SOUTH AFRICA	947.096.097	84%	9%	8%	0%	35	SPAIN	14.560.367	61%	3%	0%	36%
15	NORWAY	500.254.511	67%	4%	7%	21%	36	MEXICO	14.475.477	76%	-	-	-
16	MOROCCO	495.646.970	70%	19%	3%	3%	37	LEBANON	9.836.376	72%	6%	0%	0%
17	INDIA	385.102.288	82%	9%	0%	8%	38	POLAND	2.679.108	-	-	-	-
18	NEW ZEALAND	378.492.825	82%	3%	7%	8%	39	HUNGARY	2.189.431	70%	-	-	-
19	CHILE	217.965.598	72%	3%	16%	10%	40	CZECH REPUBLIC	1.032.289	64%	8%	21%	6%
20	MACAU	205.588.438	83%	-	-	-	41	SLOVAKIA	104.150	64%	1%	26%	10%
21	ARGENTINE	203.249.293	72%	2%	0%	26%		<b>TOTAL</b>	<b>94.056.930.222 €</b>				

Table 1: Source: International Federation of Horseracing Authorities from web site: <http://www.ifhaonline.org/wageringDisplay.asp?section=15&statsyear=2012&report=D>

One reason why mainstream economists ignore gamblers is because they cannot make up their mind as to whether they should resort to the tool-box of utility maximization or profit maximization. Some claim that gambling is in fact irrational behavior and is therefore beyond the scope of economic analysis by definition. This is because they insist that gamblers lose utility even in fair bets because of the diminishing marginal utility in repeated bets. On the other side, gamblers refuse to learn from their mistakes and insist in their allegedly irrational behavior. Gambling has been around for hundreds if not thousands of years and it is highly demanded by at least some people. There are many laws that restrict and regulate gambling and try to make it legal, so that, governments can earn money from the taxes they put on gambling, in return for sanctioning it as legal. Yet, individuals engage in many illegal activities with huge bets that remain beyond the terrain of governmental legality.

In this paper we look at the horse racing industrial complex. As the US President Eisenhower once (1961) referred to defense industry critically as ‘a military industrial complex’ in order to indicate that it had grown beyond its anticipated scope and had thereby reached the threshold of getting out of hand, we see in horse racing industrial complex a combination of closely interwoven industries with strong ‘backward and forward linkages’ among the components. The

phenomenon has already outgrown its anticipated place in the economy and has in fact come to link the economic with the non-economic just as the military industrial complex had done so during the so-called ‘golden age of capitalism’ in the postwar period. We believe that the institutional structural skeleton of this horse racing industrial complex can nevertheless be represented graphically as in Figure 1.

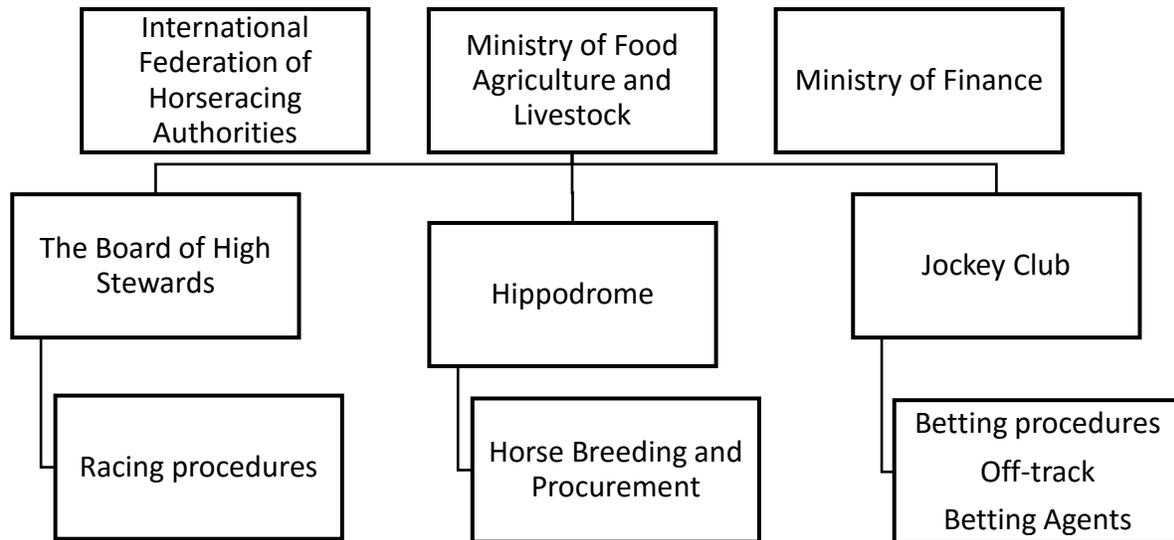


Figure 1: Institutional Network

This is an abstract specification of the basic components of a chain. Cases can be studied by reference to this general scheme. Names can change from one case to the other. More importantly, the relative importance within the whole of parts can shift considerably just as some boxes can occasionally collapse to one or a single box can divide into two in accordance with the specificities of cases studied. Here we conduct our argument in terms of the general structure but illustrate the boxes by referring to the Turkish case we know best, the origins of which go back to 1863. In general, on top of the pyramid rests the International Federation of Horseracing Authorities. This is not only the highest level but also the international one. Below are placed at the nation-state level at least two ministries, one of which is more specialized (in Turkey the Ministry of Food Agriculture and Livestock), that is, holding direct access to the Hippodromes as well as Horse-Raising, and the other, more general, and linked to the institutional chain by virtue of the pecuniary interest, that is the Ministry of Finance. Further below are linked horizontally the Board of Stewards designing racing procedures and the Jockey Clubs consisting of the riders. These two components relate to the Hippodrome where the race takes place. There exists a lower

yet far greater terrain linking betting activities from the hippodrome well into a large number of Off-track Betting Agents (in Turkey the number of such agents dispersed all over the country is 2764). Finally, there is also the Thoroughbred Horse-Raising Industry without which there would not be a regular supply of horses.

Private as well as public sector can engage in horse-raising activity. This box of the chain is also somewhat internationalized as horses are being more and more traded across the national borders. For example, in early Republican Turkey encouraging the horse-raising was seen as important for two reasons. First, it was expected to serve as a way of Europeanization of urban lifestyle. Secondly, economic development via the horse-raising as well as fiscal revenues for the state were much desired. Legal betting was introduced in 1953 under a newly elected liberal government. The then Ministry of Agriculture rented out betting rights to the Turkish Jockey Club (TJC) for a period of 20 years. Accordingly, the Board of High Stewards control the racing procedures in the name of Ministry and TJC organizes these legal bets. Nowadays, in the pool on average, there is 3 million Euro in pick six betting in each day. This means that Ministry of Finance earns around 1 million Euro from each race. This revenue originates from the taxes paid by the gamblers. Tax-rate on total betting-turnover is approximately %28.

The main objective of this study is to analyze individual behavior and the concomitant dynamics of gambling within the context of this horse racing industrial complex. This complex, in turn, is not independent from the broader socio-economic system within which it is embedded. Given this further complication, it goes without saying that even though we pursue our argument in general terms, we are recognizant of the fact that time and place matter from one case to the other, so much so, as to make them look rather unlike even if they are all derived from the same generic matrix we referred to as the structural skeleton above.

### **Cost-benefit analysis in horse racing**

It is important to understand the cost structure and the expected return of this type of gambling. There are several ways of betting on horse racing. The relative popularity of different types of betting changes from one country to the other. For example, two types are highly popular

in Turkey and there is no reason to assume that this is an unusual ranking. Firstly, one can bet for a single race and try to guess the winner. And one can bet a minimum of 1 Lira (approximately 0.25 Euros). Secondly, one can pot for a pick-six bet and attempt to predict the winners of the six races determined by the TJC which is usually the last six races of a program in one city. The cost of this type of betting is more complex. In this type of betting, the number of horses one picks for each race is multiplied with one another and then multiplied with a fixed cost that currently 0.05 Lira. For instance, if one chooses 2 horses for each race, the cost is  $2^6 \times 0.05$  which is 3.2 Lira, or if one chooses 3 horses per race (instead of 2), the cost is  $2^5 \times 3 \times 0.05$ , that is, is 4.8 Lira. The peculiarity of this type of cost structure is that betting on one more horse does not increase the cost constantly. If one predicts 1 horse for each 5 race and 7 horses for the remaining race, the cost is 0.35 Lira; or 1 horse for three races and 3 horses for the other three races, the cost is 1.35 Lira. In both cases one picked a total number of 12 horses but the cost differs according to the distribution of picks.

If one want to pay less and yet bet on more horses, one's strategy should be to write one horse to one or two races and write many more to the other races. The difficulty with this strategy is that one's favorite must win that race. The probability of this occurring is however quite low; given that 10 horses are running in a particular race, the objective probability of one's choice will be 0.1, if the other variables are held constant. But if one really did predict correct, other races will be easier for him since he had a choice of more horses. For instance, example of a coupon:

	1 <sup>st</sup> Race	2 <sup>nd</sup> Race	3 <sup>rd</sup> Race	4 <sup>th</sup> Race	5 <sup>th</sup> Race	6 <sup>th</sup> Race
Numbers	6	5	2	11	13	4
Of the horses	7	8	9		15	10
You write on		9			4	6
Your coupon					9	
Pick six						

Table 2: Example of pick six game coupon.

The cost of the six-pick coupon is  $2 \times 3 \times 2 \times 1 \times 4 \times 3 \times 0.05 = 7.2$  Lira. And one's favorite horse is in the 4<sup>th</sup> race where the horse with Number 1 was chosen as the likely winner. If Number 11 does not win, one loses all, even if one picked winners in all the remaining races. However, if Number 11 wins, one's chance of winning will increase since in other races one wrote 2, 3 or 4 horses as likely winners, thereby raising the probability of correct guessing significantly.

The vital point is that the objective probability of winning increases along with costs. If one pays more, one can write more horses on his coupon. The ability to pay more is a crucial aspect of this type of betting. But as we have already indicated above, this kind of increase in cost and increase in objective probability of winning is not linearly related. One's probability of winning does not double if one's cost increases twice. This is different from the usual type of fixed odds betting, for instance in a roulette game, if one places equal amount of money on a different number thereby doubling the cost, his probability of winning is also doubled.

Let's now examine the gains involved in this kind of betting. As is well known, there exist several betting systems in gambling. Two of them are the so-called 'fixed odd system' and the 'pari-mutual betting system'. In the fixed odd system the earning of the gamblers is certain; if one knows the winning number in roulette, his gain is 36 Lira for each 1 Lira placed. Or if one knows in advance the result of a soccer game, one's earning is determined from the beginning by the organizers as something like 2.1 to 1 Lira. One's profit does not affect that of the other gamblers. However, in pari-mutual betting, firstly the gamblers' money are collected in a pool, then some of the money is taken by the government as tax and the rest by the betting organizers as revenue. The remaining money is then divided among the winners. So, one is actually in competition with the other gamblers and not with not with the bettors who organize the betting game. This is important in so far as it actually discourages knowledge-sharing among the gamblers since one more winner means reduced gains. Furthermore, profits will be low if actually the favorite horses won in all races, since many people actually put their money on those horses; however, if horses with longer-odds are the winners, the gains will be higher since few people expected them to win and selected these horses in the coupon they played. The range of the odds is from 1/1 to the 1/100 generally

and it depends on the money bet by the players. So the odds do not show us really the objective probability of the winning of a particular horse, but it only reflects the popularity of that horse.

In accordance, we can say that the higher one pays by including in his bet the higher number of horses that can be bet on, but especially the horses with longer odds, one's probability of winning and the likely earnings will increase. However, because of the budget limit they are faced with, betters trust one or two horses in some races more, and choose those in order to decrease their costs, but prefer to write as many horses as they can, in remaining races for which they do not trust themselves as much, in such cases they would reduce their overall risk by picking more than one likely winner, yet they would also take risks and play also for the 'surprise' horses, as they know well that if only the 'surprise' horse won, it would bring relatively large gain differentials.

## **Uncertainty**

The concepts of 'uncertainty' and 'risk' are sometimes used interchangeably in everyday speech but we know that this is not true. The case involved can be called 'risk' when "the distribution of the outcome in a group of instance is known", whereas one is concerned with 'uncertainty' when "it is impossible to form a group of instance because the situation dealt with is in a high degree unique" (Knight, 1965). This differentiation can be clarified by recourse to gambling. In roulette, we are faced with risk, since it is known in advance that the distribution of a number can win, and this does not change according to repeating events. In juxtaposition, in horse racing, one can claim that a risk that arises from objective probability according to the number of horses in the race, when repeating of races is concerned, the distribution of the outcomes is not known in advance and furthermore every situation is unique. A race with the same horses and jockeys can be repeated several times, but every time it will be different from the other races, since the race is affected by the actual environment as well as the learning process of the jockey, not to mention that of the horse.

The concept of probability is quite relevant in examining uncertainty. There are two aspects of probability; one is objective and the other subjective. In one horse racing gamble, one can claim

that the probability of one horse is definite and it is divided by the number of the horses in race. According to this logic, if there are 10 horses in the race, the probability of one's winning is 1/10. Even though in the short run it cannot be seen, in the long run frequency will be definite. However there is a problem in this calculation because it ignores the 'learning process' as well as the 'uniqueness of each race'. There are many endogenous and exogenous factors that have an effect on the races; therefore, probabilities. Every gambler knows that some horses are stronger and faster than the others and some jockeys are more talented. Thus, the subjective probability comes from this idea that every situation is unique. In subjective probability, subjective belief is important in such unique situations like those we encounter in horse racing.

What are the sources of uncertainties in this game? There are many variables in horse racing that increase uncertainty. Information is important in this respect. The time it takes to get the information can be as important as the ability of the players to get it. Gamblers need first to analyze the available information. Players can reach statistics about the horse, jockey, owner and trainer. Most important are the past race performances of the horse, past races of the jockey, the weight of the jockey, harmony of the jockey and horse, and the length of the training times of the horses. Moreover, the type of the race and type of the land (solid or grass, hardness of the ground, the weather) can be studied. There is also last moment information like the nearly final odds and the horses that could not actually race and drop out. This information is available yet waits to be processed.

Second group of information is difficult to gather from the viewpoint of the gamblers. These are not statistical. The current situation of the horses in general as well as the last feed the horses ate or the likely tiredness because of previous race or training exercise. The jockey is also important in this respect. His physiological and psychological situation in general at that particular moment, along with whether or not he really wants to win the race is most consequential. The jockey must have a clear mind as he applies the winning strategy in the race.

There is another source of uncertainty coming from the types and the rules of the races subject to institutional regulation. There are different types of races such as the maiden race, allowance race, handicap race and stakes race. In addition, every race comes with certain

limitations such as the maximum or minimum age and origins of the horses. These are announced information but knowing the type of the race only gives an idea about the uncertainty involved in races. For instance, in handicap races, the strong horses have to carry extra weights, so that the less powerful horses have better chances of winning. Also, same horse is not allowed to run always the same length and/or type of race. Because, if all horses run only one length and one type of race course, it will be easier to predict by looking at the past results. Deliberate changing of the variables that determine a race shows the determination on part of the regulatory institutions to preserve the environment of ‘uncertainty’ characteristic of the horse racing.

Uncertainty is not only ex ante, however. During the race, mistakes of jockeys, wrong start timing of the horses, and the possibility of an accident complicate the picture further. Furthermore, other horses’ and/or jockeys’ behaviors affect one another. The interdependent and interactive nature of agents involved in the race adds to the picture of uncertainty that resists to simple risk calculus.

The gamblers complain that there can be illegal actions involved in the races. It is known that there are numerous jockeys penalized on a regular basis because of their illegal actions, be they deliberate or not. Occasionally a race can be cancelled after the fact for the deliberate misconduct of the jockey and the gamblers take their money back. But this is very infrequent. Choosing the wrong strategy is within the initiative of the jockey and no one can blame him because of this. This blurs the picture. Also illegal drugs cannot be given to horses. However, a trainer can affect a horse in more subtle ways that cannot be determined by tests. For example, if a trainer gives more feed and/or less water to horse before the race, performance can be directly affected in a way that cannot be depicted by tests. These make the task of decision-making gamblers all the more difficult. The uncertainty does not only come from the lack of the information about the horse’s latest situation or daily training, but it also comes from the difficulty of interpretation of known complex information (Hodgson, 1988). There is a cognitive process and some information is ignored while the rest is overweighed. There must be choice-making. One may want to write 5 horses for a race but one’s budget tells him he can only write 3. Hence decision-making gains added importance. Uncertainty increases according to one’s budget. Faced with uncertainty, gamblers are

forced to use only some of the information that they can actually process, and seek other second-best additional strategies.<sup>1</sup>

## **Knowledge**

In order to approximate uncertainty as much as possible towards a risky situation for the sake of simplification, knowledge is essential. Because in a betting situation there exist a competition among many who could potentially win, agents try hard to reduce uncertainty into a calculable risk situation by making best use of knowledge that can itself be expanded. Social and material environment and signals coming from the “structured interactions with individuals and artefacts” are highly relevant for understanding the cognitive process (Hodgson, 2007). In the case of horse racing, regularly published bulletins, track betting agencies, hippodromes and insiders are the sources of knowledge that serve the cognitive capacity of the gamblers.

Bulletins are published by horse race experts. They provide valuable information and not just mere data. These bulletins give points to the horses according to their analytical criteria and authors express their views about the likely race outcomes. There exist much data in these bulletins just like the official race programs but their distinguishing attribute from the latter consist in their commentaries. Also some data like the last training performance of the horses is provided exclusively in these bulletins. Every bulletin has a different rating system according to the data they have at their disposal. Accordingly, the favorite horse of one bulletin can be a 4<sup>th</sup> in another bulletin. This is the first way knowledge is differentiated via the information provided in the betting process.

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<sup>1</sup>For example, in Turkey it can be observed that many gamblers have a predetermined daily budget before betting on the game. Generally their coupon costs around 5 Lira. For instance many of them play like a combination of (3, 3, 3, 2, 2, 1) horses for pick six betting which costs 5.4 Lira. They pick one race for writing one horse as favorite, then 3 horses for another three races and 2 horses to the remained 2 races. So we infer that they play according to their limited budget. However if they want to increase their budget they can become partners with a friend so that they can write more horses in their coupons and increase their chances. This is nevertheless not very common, since it is difficult to agree with a friend as people hold different opinions about the horses and would rather one horse over the other. It is thus very difficult to find aggregable and complementary friends for partnerships.

Every gambler tries different bulletins but by experience comes to follow one bulletin regularly. This revealed preference for a specific bulletin emerges from a process of trial and error and has much to do with learning by doing and tacit knowledge acquired through betting experience. The gambler in question believes some author commentators more than others and takes his predictions more seriously in formulating his betting preferences. Generally, it is seen that certain local official track betting agents carry only one specific bulletin, since the regulars of that locality adhere to the clientele of that particular bulletin. Novices are also not confused as they are initiated to the betting process. However, betting has also become much de-localized as more and more people bet on the internet. These betters have access to their preferred bulletin as well as many others. Their situation resembles more the case of hippodrome betters where rival bulletins can also be reached. This is why betting for the inexperienced betters is more difficult either in the hippodromes or on the internet where they can get lost amidst the bombardment of much contradictory information. Traditional localities of agencies are much more convenient for them in providing them with a road-map and guidelines to mapping in order not to lose their way. In this way they are enculturated.<sup>2</sup> They are much more easily introduced to the habits and routines of decision-making. This is why the traditional track betting-houses continue to survive despite the hippodrome and the internet.

Track betting agent is an important institution. These are legal places licensed by overseers such as the jockey clubs. Some of these agencies are similar to coffeehouses as they carry drink service. Yet the layout is quite different from that of a regular coffeehouse. Main attraction of this locality is a big TV that shows the races live. Tables and chairs are usually placed to the corners and near the walls of the room. Small tables are suitable for at most 3 people. Gamblers try to sit as far away from one another and prefer to remain silent except during the race broadcast. Gamblers rarely talk with one another, and when they do, their conversation is generally based on topics like daily life; in other words, they prefer to talk about everything but the races. As mentioned above, regulars of such an agency reveal a preference for a certain bulletin with which the locality is identified. This does not however mean that gamblers share their knowledge with one another. As

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<sup>2</sup> The language of gambling is difficult to decipher for the unaccustomed. There are many terms used in bulletins without an explanation and it is assumed that readers know them. Without knowledge of some concepts and a form of language, it would be next to impossible to evaluate the information that the gamblers have access to. As Hodgson said, “[T]he transmission of information to individual is impossible without a coexistence process of enculturation, in which the individual learns the meaning and value of the sense data that is communicated” (Hodgson, 2007).

stated above, this is because, in pari-mutual betting, one more winner decreases the anticipated gains of previous gamblers. Therefore the gamblers engage in highly individualistic behavior in this type of betting. They come together every day and they know one another but they are highly aware of the fact that they are competitors. This specificity can easily be observed when compared with centrally organized soccer betting where gamblers talk to one another and share their knowledge because a fixed odd betting is concerned. We stated above that in horse racing some bettors come together and play jointly. But the prime motive behind this unison is not knowledge sharing but cost sharing. The question remains as to why they come there if they do not share knowledge among themselves. First of all, they have a chance to observe the last-minute situation of the horse on TV and have a chance to bet after that. Secondly, the odds are calculated continuously and publicized on the screen. Hence they have access to the latest odds information. Finally, for the gamblers who play a single race one after another, a continuous process is involved: Try to predict the race, bet on the race, get the results, in case of winning; get the payment, predict the other race and bet again. The time between the races is about 30 minutes and this process can only be done by being a regular in a betting agent. Moreover, there may be a social aspect involved here. Veblen thinks that there is one more motive than the “belief in luck”, it is the “desire of the anticipated winner, or the partisan of the anticipated winning side, to heighten his side’s ascendancy at the cost of the loser” (1953). The winners’ solidarity in celebration may be important. Last but not the least, many of the people who spend the whole day in the agencies are either retirees or the unemployed. As such they have no better place to go.

Hippodrome is the other highly specialized and localized institution in horse racing. Hippodromes are the places where gamblers can see the horses and watch the races live. Usually they are outside the city center so that gamblers have to spend time and transportation costs in order to come and bet there. Advantage of gambling in hippodrome is mainly because gamblers have the opportunity to see the horses live in front of their very eyes just before the race. Hippodromes are special in the sense that gamblers have different habits than track betting agents. As we mentioned before in track betting agents people behave individualistically within the allegedly otherwise social environment; however, in hippodromes this is not the case. Gamblers who come regularly to the hippodromes know one another well and they behave somehow collectively at least in some ways. Many of them have been experienced for many years and

acknowledge betting as their preferred social habit. They seek social distinction by virtue of this habit. They come to the hippodrome early and they analyze races together. They try to select the races for which they will write only one horse as likely winner. Of course there are differences in their choices for the other races; everyone thinks such races may come with a ‘surprise’ win. They share their knowledge with one another as long as it is not an insider’s information. They say that in the case of insider information they can only tell their true friends, if they tell it at all. Moreover, when races begin, they follow their coupons and if one of the gamblers does well they wait until the last race and before the last race the owner of the coupon offers a partnership to the others. For instance, it can be 50 Lira to 1/8 of the price if he would know the last race. Then the other gamblers can become partners of this gambler. This is a habit of the gamblers who prefer the hippodrome. With this partnership the gambler who correctly guessed 5 races can earn money even if he could not guess the last race, and the other gamblers have a chance to earn money with this partnership if the last race is guessed correctly. Trust is important in this unwritten agreement and they say that promise is enough for this agreement; they can trust each other even if they earn millions of Lira. This kind of trust can only exist among the socially distinguished and privileged who frequent the hippodromes. It comes with distinction in costume and outlook and with a certain class accent.

From the viewpoint of information, on the other side of the betting process, some people who are nearer to the horses like trainers or the owners of the horses are important indeed. They know more than other people about their horses. And the people near to those people can get this information and can predict the outcome of the races better than the others. But this information is not obtainable by all. Also the jockeys can predict better than other people.<sup>3</sup> This characteristic of horse racing is similar to stock market exchange. It has been stated that “owners, trainers, jockeys, grooms and clockers who all aspire to corner special information about each race's potential outcome. Thus, horse racing in one more aspect is similar to the stock market where knowledgeable ‘insiders’ may be able to profit from their unique positions” (Snyder, 1978).

It should by now be apparent that tacit knowledge is all important in horse race gambling. Anyone who is not short of money can bet on all the favorites which are publicized by bulletins

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<sup>3</sup> A jockey in Turkey has been quoted for saying that he can understand what the horse will do when he looks at the horse in the morning of the race.

and win under normal circumstances. But this relatively assured gain will be small and ordinary. If a favorite horse wins, this means that many people have already predicted, so the gain is small indeed. The main goal is to predict the ‘surprise’ horses, and for this the bettor needs access to additional knowledge and the ability and experience to process it. There is much learning that comes with time in this respect. Which jockey mostly makes surprises, which numbers of races in the day are likely to come with a surprise, which hippodrome houses relatively more surprises, etc. By seeing the horses while running, bettors become gradually familiarized with all odds and they can process their information more quickly. In short, in a sense, knowledge in horse racing is unique to each gambler.

## **Rationality**

The assumption of scarcity offers a convenient point of departure to talk about agent rationality. As far as horse-racing is concerned, decision-making process is subject to the budget constraint of the gambler. However there exists highly varied budgets for the wide range of gamblers. If rationality is correlated strongly with scarcity, then the great variance of budgets can point to a range of rational gambler actions. For example, in one horse betting, gamblers who have low budgets probably bet on ‘surprise’ horses if they bet for single event, since lower odds that go with ‘favorites’ would not yield them meaningful gains. On the other hand, if they bet with six-pick coupons, considering their limited budget, they would rather choose ‘favorite’ horses since there exist as many as 6 races and since they can bet on very few horses, betting on ‘surprise’ horses would decrease their probability of winning more than in the previous case. We should remind ourselves that these subjective probabilities are not mathematically-based, but they are knowledge-based.

Let us assume that all gamblers have the same budget and bet on single races. Do all gamblers behave the same way and chose the same horses? Do they have homogenous expectations<sup>4</sup>? Answer of this question has two aspects. First, as seen in the previous section, knowledge of gamblers are different so that, in turn, their choices will be different. Secondly, it is

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<sup>4</sup> Homogenous expectations: All parties to a gamble have identical expectations as to the outcome.

known that the behavior of the gamblers change according to the results of the previous races in the same day. In one horse betting, if a gambler has lost in the previous race, he is more likely to bet on a 'surprise' horse in order to make up for his loss. Psychologists think that the players' attempt to recuperate their losses by heavily selecting even longer odds horses than usual in the subsequent race(s) (Snyder, 1978). Hence, their decision-making process is path-dependent and determined heavily by the previous stages.

Rationality is usually implicative of either a minimizing, or maximizing, or more generally, optimizing behavior. Cost minimizing and profit maximizing behavior is expected to be pursued by gamblers. If every gambler behaved rationally, that is, if each bettor successfully attempted to minimize losses and maximize gains, then subjective and objective probabilities would have been equal. The return to bets in every odds-class would then be identical and would merely equal the negative loss due to the authorized take (Snyder, 1978). The maximization of gain contradicts with minimizing the risk and costs. Therefore, we can infer that gamblers do not have predetermined unique 'rational' actions. Systemic uncertainties, complexity of information, and learning from the successive race experiences create the differences in gambles' actions and launch us on a trajectory of divergent paths none of which can be assessed as 'irrational'. Because there exists no omniscience, that is, full knowledge, in horse racing, we are not faced with the perfect 'rational economic man' either. Perfect knowledge is impossible because of "bounded communication", "bounded information processing", "bounded calculation", "bounded preference formation" and "bounded emotional" skills of the gamblers (Pagano, 2007). Gamblers have bounded communication skills since information and knowledge cannot be transferred readily to other gamblers. It is also difficult to transmit information and tacit knowledge especially from the experts to the novices. These problems are further complicated by differential mastery of the language in general and jargon in particular. In addition, gamblers are bounded in their capacity to store and process information. To economize, gamblers should know their costs and revenues clearly. However, marginalism is completely out of the picture when we are faced with six-pick betting and one horse betting. Equating the marginal costs to the marginal revenues is not possible. The cost of writing one more horse on the coupon differs according to which race one will add this horse. Moreover, there is no possible way to predict one's revenue until all races end, and there is no possibility of an average revenue, because unless one knows all the winning horses and wins,

(which can also be actually lower than one's cost if favorite horses win in many races), one can lose all his money. Hence,

It is certainly reasonable to assume that individuals will seek to economize on their bounded information-processing capabilities. However, after years of rational expectations, we know even better that this account cannot be fitted into any simple maximization framework that does not include the constraints due to historical and the nature of the agents. Only if we know the beliefs and the personalities of the agents and the information that has already become a part of their knowledge, can we understand how they 'economize' on their limited information skills. (Pagano, 2007; 23)

A further limitation is to do with the calculation skills of the gamblers. First of all, gambling in horse races generally has a time limitation like one day. Gamblers have only one night to do their homework with bulletins and one morning until the races begin in the afternoon. Moreover, all their calculations can become useless when they see the horses tired shortly before the race. Then the gambler has about 10 minutes to rework his calculations.

A bounded preference formation skill is another common problem in horse racing. Gamblers generally develop their preferences over time and behave accordingly. However this can become an obstacle since they can be stuck with these preferences and could not see others as circumstances change. For instance, some gamblers have favorite jockeys and believe that they can win several races a day; however, in retrospect we know that even the most favorite jockey cannot win 3/4 of his races. A gambler nevertheless believes in his preferred jockey and insists on writing his horses successively. This is where belief overrides objectivity when faced with an enormously multi-faceted problem. Lastly, emotionally bounded skills of gamblers are also important in the sense that their rationality can be affected by their personal life and identity problems. For example, they may bet more to 'surprise' horses because they want to be appreciated by other gamblers or may bet on 'favorite' horses with higher amounts in order to earn more money. Their wants are not static and their level of aspiration are not given once and for all time (Tsukahara and Harold, 1976). These kind of behavior are highly volatile and changes from one day to the next.

In the very beginning we acknowledged the possibility that mere gambling, irrespectively of winning or losing, can be a consumption preference of the bettors. In other words, they may enjoy gambling for the sake of gambling. There may not even be any economic motive behind betting on horses. When we observe the profile of gamblers found in a betting agency, we see that a significant number of them are retirees or hopeless unemployed, who have nothing better to do.

They come to an agency with their friends and spend leisurely most of their time that has no opportunity cost in their eyes. The question of why people gamble can be explained by an instinct that is one of the most obvious and oldest in the history of mankind. The question of how people gamble, on the other hand, can be investigated by looking at individual habits which are shaped by the social institutions in which they are shaped.

## **Conclusion**

Horse racing can be approached as part and parcel of 'prediction markets'. It is like stock exchange markets in some aspects. It can also be characterized as an 'information market' since it is mainly based on information dealing and processing. Nevertheless, we observe that standard economic theory does not hold true in these markets. Moreover these markets are not generically natural, but strongly 'instituted'. The analysis of individual behavior in an institutional context by recourse to the concepts of uncertainty, knowledge and the rationality shows us how phenomena characteristic of the horse racing industrial complex can actually help us better understand the nature of individual behavior in a market environment. Limitations, learning processes and habits are very important in decision making processes as long as uncertainty cannot be eradicated. Each case is thus inevitably time and space specific albeit in different degrees. When approaching human behavior, we need to remain suspect of universalist claims. We must take into consideration existing social structure and the habits and routines associated with it that constitute the subject-matter of institutional dynamics itself.

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