HOW TO ENJOY A GOOD ESPRESSO

[Visiting Associated at Caltech(1991) and Espresso Lover]

Espresso is several things all at once. It is a unique method of coffee brewing in which hot water is forced under pressure through tightly packed coffee, a cup or at most two at a time. It is a roast of coffee, darker brown than the American roast, but not quite black. In a larger sense, it is an entire approach to coffee cuisine, involving not only roast and brewing method, but grind and grinder, a technique of heating milk, and a traditional menu of drinks. And in the largest sense of all, it is an atmosphere mystique: the ***espresso*** brewing machine is the spiritual heart and aesthetic centerpiece of the European-, in general, and the Neapolitan-, in particular, style *cafe'*.

It is not my *cause celebre* to attempt to convince anyone who prefers his coffee black that ***espresso***, when well prepared, makes the brew more palatable. I firmly believe that coffee was created for man's maintenance and pleasure to the same degree as wheat, or the other fruits of nature was.

1. VERY SHORT HISTORY

How long coffee remained unadorned cannot be exactly determined. First the Arabians drank it as a concoction of coffee hulls and pulps soaked in cold water. Time passed and the process of brewing improved until the hot, dark drink was made from berries, hulled, roasted, ground into a powder, and boiled in water without additives.

Indeed, so taken up with thoughts concerning this brew were the French that they were responsible for discovering that coffee did not need to be boiled but it could be brewed by stepping. In 1755, they abandoned boiled coffee altogether to perfect what is today considered the "*drip method*."

For four hundred years prior to that time everyone had a different notion about the best way to boil coffee. It is my opinion that the art to find out how to prepare a nice coffee continues in every part of the world. In Italy certainly it is so, and espresso, the Italian coffee, is the national beverage that has the greatest number of lovers.

2. INGREDIENTS

2.1. COFFEE

Until a few years ago coffee was the second world business after oil. (Now it seems that drugs are the first one.)

The coffee plant is a small tree that produces cherries which have one or two seeds inside.

The most suitable climate for coffee growing lies within the tropics, where the mean annual temperature is 70° F. However, it should not be lower than 55° F and higher than 80° F. Higher temperatures cause the beans to mature too quickly, and beverage quality suffers.

The ideal altitude is about 7,000 ft., the frost line in the tropics, but we can find trees also at lower altitudes. It is a botanical oddity that the best coffees are grown where coffee does not grow wild. Coffee cultivated at higher altitudes matures slowly and develops more and better flavored oils.

There are three species of coffee Arabica, Robusta, and Liberica.

`Coffea Arabica`

The species of coffee which has traditionally provided world with most of its crop is coffea Arabica. Indigenous to Ethiopia, it thrives also in Java, Sumatra, India, Arabia, Latin America, etc.. It is very delicate plant but produces the best coffee quality. It is interesting to know that there exist many varieties of Arabica trees, and, to prepare a nice espresso, a *mixture* of seeds, which is called *miscela bar*, is utilized.

`Coffea Robusta`

Trees of this type were first found to be growing wild in Zaire. They can be successfully cultivated in the hotter, wetter lowland(up to 3,000 ft.) than Arabica but the flavor of Robusta does not compare favorably with this last one.

`Coffea Liberica`

Its flavor makes it unpopular with consumers.

2.2. COFFEE MACHINE

In Italy there are three kinds of coffee machine: *macchinetta* or *Neapolitan pot*, *Moka-type*, and *bar-type* (here and later on the word bar will indicate cafe‘). The first two are used to prepare home-made coffee, while the last one is used to prepare the really true espresso.

`Macchinetta`

It is used to prepare a modified espresso. This device doesn’t make a true espresso, but the beverage is palatable; also, it is no as heavy-bodied as the brew that is made by steam and pressure. Macchinetta is substantially constituted of a three-piece aluminum device: a water receiver, a coffee basket, and a beverage receiver. When water boils, the macchinetta is turned over to let water flow through coffee.

Moka-type

It is used to prepare the home espresso. Also this device is constituted of a three-piece aluminum (in general) device like macchinetta, but the working principle is like that of bar-type. When water boils, it creates a steam pressure in a water receiver. This pressure pushes up water, which, flowing through the coffee basket, extracts flavor from coffee. The coffee basket is the form of a funnel in which there is a filter where coffee is put. The beverage receiver could be seen like the mirror image of the water receiver and coffee basket. The difference consists of the fact that funnel and beverage receiver are one piece, and this funnel has a thicker filter, so only the brew can pass but not the coffee pressed by the water against it.

Bar-type

The early espresso machines, with their spigots, handles, and gauges, were designed to provide quickly brewed coffee: hence the name, because ***espresso***, in Italian language, means fast. Speed was achieved by channelling, under pressure, a mixture of hot water and steam to individual spigots equipped with quickly detachable filters.

The oldest espresso machine was realized in France by E.L. Santais in 1843, but it remained for some Italians around the turn of the century to modify Santais' invention and turn into the first modern espresso machine. In Italy the size of the strainer that holds the coffee it was decreased and the number of valves increased, enabling these rapid filter machines to produce several single cups of coffee simultaneously, rather than a big pot at time.

The modern, streamlined, low-slung espresso machines went into production right after World War II. In these new machines, the horizontal water boiler gives steam and water a better chance to mix. Thoroughly blended steam and hot water, pushed under pressure through the coffee, yields a cup smooth and palatable, with no sacrifice of strength or flavor.

It was again in Italy that the bar-style machine was improved. The simple valve of the old days was replaced with a spring-powered piston, which pushed the water through the coffee harder and faster.

Today the modern technology has introduced the hydraulic powered piston, which is easier to manipulate, but the principle is the same.

2.3. WATER

In general, a little importance is attached to water among coffee ingredients. I cannot believe my ears or my eyes when, speaking or reading about coffee that people don't make any reference to water.

I believe that water is important just like coffee or the coffee machine to obtain a nice espresso (or coffee) . If water doesn't taste nice, espresso cannot taste nice because it is a beverage, and its substances are easily altered.

Water should be coffee's only partner in the brewing process because it represents about 99% of a cup of coffee. Therefore, even though it is obvious, the water should be free from any undesirable tastes or odors. Naturally soft water yields the best brew, artificially softened water the worst. A good coffee and a good water are mixed into a coffee machine. Hard water doesn't directly harm flavor and aroma but does mute some of the natural acids in coffee. ***If the water is not pleasant to drink, don't make coffee with it !!***!

I remember once, when I was a university student, speaking with a friend of mine about water and coffee, he said to me, "Believe me or not it is the Neapolitan water that makes the difference in the coffee. I bought the same coffee I use here, and I brought it with me to my town. I prepared the coffee, but the taste was different. So I decided to bring with me the same Moka machine, and so I did. But, once again, the taste was different. Could you please tell me why if it is not the water?"

3. PREPARATION

The espresso system was developed in and for cafes; despite advances in inexpensive home espresso systems one still can not duplicate the finest espresso in one's kitchen.

3.1. COFFEE GRINDER

Independent of the machine, the golden rule is that coffee must be ground before using it to avoid loosing much of the volatile substance and to let humidity to alter the taste. The tool to grind beans must be the coffee grinder. It is absolutely advised against to grind beans in an electric mixer because the high speed of the blades could burn beans giving them the characteristic burned bitter flavor.

The heart of the grinder is two little corrugate steel disks. One is stationary and the other is rotated by a handle or motor. A worm gear feeds the coffee, a bean or two at time, between the corrugated disk, where it is crushed until it drops out of the bottom of the grinder. This solution has never been beaten because, one, the grind is uniform, and two, by adjusting the space between the plates, one can regulate the fineness of the grind accurately and consistently.

In preparing espresso fine grind coffee must be used because the finer the grind the more contact there will be between coffee and hot water, and the faster and more thoroughly the essential oils will be released without further releasing harsher less soluble chemicals.

However, a coffee powder is absolutely advised against because the essential oil is destroyed by completely pulverizing: the heat and friction of the grinding process literally vaporizes it.

3.2. THE TECHNIQUE

I believe that bar-type is the best machine to prepare an espresso. However, a home machine can possibly reach high results; when coffee is prepared by a loving hand it can be excellent. It is possible to tell by the quality of the coffee in the pot whether or not there is a loving relationship between the one who has made it and the one for whom it was made.

Anyway, returning to the bar style, the first thing to do is to be sure that water temperature be high, so water and steam are well mixed. Because it is important that during the brewing process this mixture maintain the right pressure and temperature, the bigger the machine the better will be the result.

In fact, when a cap of espresso is prepared, temperature and pressure can change inside of the machine because new fresh water is introduced. Now if the machine is small, it is easier for this happen, thus reason home espresso still can not duplicate the finest bar espresso when prepared with the same kind of machine.

Only after the machine has reached the right pressure and temperature, it is possible to proceed with the preparation. Put coffee in the appropriate tool (strainer) until the coffee fills the strainer. Then press ground coffee strongly. If the coffee to the strainer is not well pressed, hot water and steam will pass through it too quickly without having the time to take flavor fully.

After pressed coffee, insert the strainer into the machine, and let steam and water flow through it. Water must pass through coffee only filling half coffee cup: just the time to catch flavours. When coffee exits from machine, about three hundred substances are dispersed in the air, and this is the reason why we smell a nice aroma. The others are caught by water. If you let other water flow through coffee, it takes wood substances and the coffee tastes horrible.

3.3. COFFEE CUP

Another fundamental element in preparing a nice espresso is the cup. This little tool has the delicate task of preserving the espresso after exits until it is drunk.

It should be in heavy ceramic or glass because it is easy to clean and doesn't release any characteristic flavor when lips touch it. The coffee cup golden rule is that it should be warmed with hot water before putting espresso, so coffee doesn't have to exchange any element with its container, not even its warmth.

In Naples it is popular to find bars that have a little container box connected to the espresso machine through a little pipe, in which there are cups and hot water.

3.4. SUGAR

It is my opinion that this ingredient should be a bare minimum, a little bit, just one coffee spoon and half are widely accepted.

If you want to taste real espresso, you must drink it without anything. Sugar, sometimes, masks the right flavor of the espresso. If it tastes nice bitter, it is an excellent espresso, otherwise no. But because people like to sweeten coffee, according to ancient Romans that said, "*de gustibus non disputandum est"* I will not feel say any more.

However, once in Naples, while I was enjoying my espresso in a bar, a guy entered and, after having greeted the bartender, ordered a coffee. I could not believe my ears when I heard the bartender refuse to prepare him a coffee and tell the guy to go to another place to drink coffee. Because in Italy he who has a store cannot refuse to sell his normal exposed products (in this case coffee), I observed to him that the guy could call police and obtain his espresso. The bartender replied, "Police or not I will not prepare him coffee because I know the guy very well. Whenever I prepared him the espresso, he put in the cup much sugar, and every time I explained to him that he could not taste the nice coffee that, modesty a part, I prepare." And I agreed with him about this last phrase. "But he continued to drink my coffee too sweet, and so I promised myself to prepare him a cup of coffee no more." To be honest, I did not know what to answer him because my mind and my heart agreed strongly with him.

4. A CUP OF CULTURE

"A thick syrupy decoction of dark-roasted beans it is the choice, nay, the passion of coffee lovers throughout Europe and Latin America. We Americans should treat ourselves more often to the pleasures offered by this vigorous brew!" I read once in a magazine while I was awaiting my turn at a doctor'.

My question is, "Is this quote true or not?" I know that this a philosophical question, but espresso is also this. Because in the world of the philosophy all is debatable, maybe you will not agree with this my *cultural* conclusion, and we can discuss on. Anyway, it must be pointed out that this mode to interpret the *Spirit of the coffee* is not a simple intellectual speculation, it represents the generation effort and research to obtain this liquid that retempers body and soul.

Therefore, it is not improper to talk about *coffee culture*, because culture is not education or experience, but it is the set of values that a people is able to assimilate and transfer to future generations.

For us, espresso is not simply a liquid but something that is, so to speak, halfway between liquid and air; a concoction that, as soon as it touches the palate, is sublimated, and, instead of going down, goes up and up until it enters the brain, where it nestles in a companionable sort of way so that for hours on end a man can be working and thinking, "What a wonderful cup of coffee I had this morning!"

I believe that in Naples this culture, which has ancient roots, has reached levels that I have never found in other parts of Italy and the world I have visited.

4.1. TASTE

I drank much espresso in my life, and my experience, in general, suggests to me to refuse a cap of coffee when a friend of mine, showing me his little espresso machine, wants to offer me one. They very often use this machine only when friends visit them. Therefore, they use old ground coffee and warm water, and you can foretell the taste of the resulting prepared coffee.

Coffee must be drunk very hot, with *CCC* (dialectical acronym of words *Cazz Co'm Coce*), according to a popular saying, so you are forced to sip it. In this mode it is possible not only to let the smell enter the brain (because the first taste is the smell) but also to taste it, just as wine tasters do.

I spoke before about sugar and quantity. So a little quantity makes the brew palatable. Until a few years ago, it was bartender's job to sweet customers' coffee. Who wished bitter coffee, had to ask for it. Today, instead, with the appearance of modern life diseases like diabetes, body weight control, and etc. it is more practical that everyone sweets his own coffee. But one day while I was awaiting in a bar for my coffee, a customer entered the bar and asked the bartender for a *caffe' condito*, which literally means dressed coffee. I was surprised to hear such a request because I didn't understand what he would say. My idea of privacy blocked me from asking the meaning. But when a few seconds after another customer asked for the same request, I could not resist posing my question. "What does *caffe' condito* mean?" I asked. One of the customers answered, "It means I ask the bartender to sweeten my coffee." "Why," I replied, "Can not you to sweet it yourself?" "No, I can not, because only he knows the right quantity of sugar to put in the cup. I tried to sweeten it myself, but the taste was not the same:sometimes sweeter and sometimes more bitter instead when he sweets my coffee I really enjoy it."

4.2. FRIENDS

One day, during a friendly conversation, Gico, a Milanese friend of mine, said, "In our office we hardly ever go out for a cup of coffee because we have automatic vending machines on every floor. You put a coin in, press a button, and get whatever kind of coffee you like, espresso or cappuccino, with or without sugar."

Gianni, an other friend of mine asked, "American machines, are they, Gico?"

Laughing, Gico replayed, "No, they are probably made in Milan."

Peppino, the third friend of mine, said disapprovingly, "The Milanese and the Americans are two of a kind, namely the kind who believe that coffee is a beverage to be drunk. My God, do you realize how serious a matter it is this business of automatic machines for dispensing coffee? It is an offense to the sensibility of the individual, it should be referred to the Civil Rights Commission."

"That is going a bit to far," said Gico.

"Not at all. It is your duty, my dear friend, to explain to your superiors that when a civilized man requires a cup of coffee, it's not because he needs to drink coffee but because he has felt the urge to renew his connection with humanity. Therefore, he is obliged to interrupt whatever work he happens to be doing, invite one or two colleagues to join him, stroll in the sunshine to his favorite bar, win a minor altercation about who is going to pay, say something complimentary to the girl at the cash register, and exchange a few comments on the sporting scene with the bartender, all without giving the slightest hint about how he likes his coffee, because a proper bartender knows his customers' tastes already. This is a ritual, a religion, and no one is going to persuade me that it can be replaced by a machine that swallows a coin and spits out some anonymous liquid with no taste and smell."

4.3. CONCENTRATION

"Peppino is right," said Gianni. "You have to drink coffee in a spirit of respect, of devotion. I remember the bartender at my local bar giving me a good piece of his mind one day when he saw me reading the sports page and drinking coffee at the same time. 'What do you think you are doing?' he said, 'Why are you not paying attention?'"

"It is true," I said. "When I am with my friends in the bar to drink a coffee, we use that break to speak about every thing, also while we are drinking, but our mind is thinking to the coffee. It is not unusual that, if coffee doesn't taste nice, one of us interrupts the conversation and says, 'What did you say? Excuse me, but I was not following you,' and then adds, 'This coffee tastes horrible!!!'"