

*Writing science and philosophy
with fountain pens*



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To CALIBRE readers.

Fountain pens are lovely writing instruments, holding powerful intellectual symbolism of connection with the past. The great minds of the late 19th century and first half of the 20th century recorded their ideas on paper through these iconic objects. In these times of cold keyboards and robotic minds, I make this essay public as an invitation to an attractive and gentle reflection, in the hope that it can motivate students and teachers to exercise their creative minds by connecting brain, hand and paper with these simple and wonderful extensions of mind.

Nílo Serpa



Stylophilic Notes of a Physicist

Science and Philosophy Recorded by Fountain Pens

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Abstract: This essay summarizes my experience as a user and admirer of fountain pens, while in the condition of theoretical physicist and architect-urbanist. This is not an exhibition of famous brands, but an illustrated set of reflections, bringing together interesting scientific observations and curiosities that I have been taking note of during the exercise of my professions. More than a history, it is a record of motivations and archetypes that have linked the writing instruments to my professional fulfillment over the years. The pens shown are just the ones that have been most present in my scientific production since 2005, which does not mean that only these were used. If the reader wants to read about brands like Waterman, Aurora, Lamy and Mont Blanc, here is not the place. Although I have a few and, in general, they are great pens, they are not among my favorites.

Key words: Fountain pen, writing instrument, scientific production, stylophilia, collection.

Resumo: Este ensaio resume a minha experiência como usuário e apreciador de canetas-tinteiro, enquanto físico teórico e arquiteto-urbanista. Não se trata de uma exibição de marcas famosas, mas de um conjunto ilustrado de reflexões, reunindo observações científicas interessantes e curiosidades que venho anotando durante o exercício das minhas profissões. Mais do que um histórico, é um registro de motivações e arquétipos que vincularam ao longo dos anos os instrumentos de escrita à minha realização profissional. As canetas mostradas são apenas as que estiveram mais presentes na minha produção científica desde 2005, o que não significa que somente essas foram usadas. Se o leitor deseja ler sobre marcas como Waterman, Aurora, Lamy e Mont Blanc, aqui não é o lugar. Embora eu tenha algumas e, de um modo geral, sejam ótimas canetas, não estão entre as minhas preferidas.

Palavras-chave: Caneta-tinteiro, instrumento de escrita, produção científica, estilofilia, coleção.



PART I: Autobiostylographical Notes

1 Introduction

I do not consider myself an expert in vintage fountain pens. Much of what I learned about fountain pens was from my visits to other countries, including antique fairs, exhibitions and specialized stores. However, as theoretical physicist in a time when everything is gone virtual, I like and prefer to write manuscripts before inevitably making them "*compuscripts*" (it is an excellent opportunity to review the first version of the text and make improvements). Therefore, I can say I am a very practitioner of stylophilia, collecting and using the treasures I have been acquiring over the years. I also do restorations, and although I am not a trader, I occasionally do some deals, mainly exchanges and repairs. Nevertheless, an important lesson was learned: sometimes, it's preferable to use a gorgeous old pen as a dip pen rather than risk an uncertain restoration that would lead you to set aside it for want of a part that no longer exists, or having it broken in the attempt to repair (the mechanical behavior of very old materials is unpredictable). For example, taking the section out of the barrel is a very dangerous maneuver, and anything that can be done to avoid this intervention should be seriously considered.

Every now and then, I buy a fountain pen from the post-70s era, but I really like ones more than 60 years old, preferably made with celluloid, casein or hard rubber, with gold or gold-filled nibs. Features such as weight, writing thickness and nib flexibility are not fundamental criteria for me, as I have uses for all of them (good vintage fountain pens are like fine wines: there are occasions for everyone). For example, equations become more readable with fine writing, while texts look elegant with wider nibs, or stub nibs. Rigid nibs are good for porous paper, as opposed to flexible nibs best suited for coated paper (lately I have preferred coated paper). To write fast several pages at a sitting, the flexible nibs are not suitable; although all nibs may relate to the way I work, writing as fast as the thoughts flow is a very demanding task for flexible nibs. At least that's my impression based on decades of writing. In fact, everything depends a little on the weight of your hand and the way you write.

Why old fountain pens? I think we can invent reasonable explications for everything, including our inexplicable manias. Perhaps a way of reconstructing the best of the past through the acquisition of disappeared technologies, or perhaps some kind of obsessive-compulsive behavior. Undoubtedly, writing is much more beautiful and pleasant with fountain pens, in addition to the fact that nowadays there is no longer the variety of the old nibs, which in considerable part were made by hand. For me, old fountain pens are always going to win out, especially because of the nibs and the materials used. Anyway, my intellectual life began very early. We were a family of musicians, poets, philologists, linguists and geographers, almost all versed in philosophy. Therefore, writing has always been a natural activity in my home. In the 1960s, fountain pens were still common among teachers and students. My parents used Parker vacumatics and Sheaffers, and I wrote with a comfortable covered-nib *Compaktor* (which, sadly, was lost). This certainly left good memories, but there is also my affinity with science and intellectuality in general from the first half of the 20th century. Tolkien hand wrote most of his annotations using a dip pen equipped with an Esterbrook #314 nib. Freud had predilection for a Sheaffer Flat-Top.

Dylan Thomas used a Parker 51, while Einstein a Pelikan 100N and a Waterman Taper-Cap. Churchill had an Onoto, and, if I am not wrong, a Conway Stewart Stylo too, during WW II; and so many others. Apart from that, I see stylophilia as an excellent hobby with which to do my restless mind. In a nutshell, philosophy leads me to think that, unlike pressing keys, writing with the hands is drawing thoughts on a sheet of paper. Hands are extensions of the conscious mind, and I think we should maintain such a distinctive human connection that got us here. I see there could be no more correct slogan than Compactor's: "The best things in life are written by hand" [2].

There are several websites and books of major collectors, sellers and most prolific pen makers with a wide variety of brands and models, as well as detailed information [1-11], so it would not make sense to create a similar work. Among those websites, there is the Brazilian best virtual place "Pensforever", currently managed by collector Fernando Maurano Oetterer, from whom I acquired several excellent pens at good prices (his late father, Carlos Fernando Oetterer, already assisted my first web purchases, years ago). The site offers wide variety of brands, in addition to providing useful information for collectors. Besides, many brands are hard to provide a comprehensive history. Keeping this in mind, this article, far from setting out to build an exhaustive historical record, seeks to describe a personal experience — with some emphasis on smaller or less well-known brands —, adding some philosophy and technical touches and observations of physical nature on the materials and mechanisms for supplying and maintaining fountain pens. As well, I briefly document some of my lines of theoretical work associated with the pens I use most. From this perspective, one thing that stands out is the identification of who innovated in the manufacturing process and in the concept of practical use itself, something that I will try to highlight whenever possible. In the sequence, all illustrations represent selected items from my modest private collection; they have to do with my particular preferences for everyday use, and not with disputes between brands. I hope this writing will be useful and motivating for someone.

2 *Physics and pens*

*"Silence, someone said, is a virtue that makes
us agreeable to our fellow men."*

Samuel Butler

Contemporary physics is an area of knowledge that requires a lot of personal cost if you want to develop innovative work in face of the uncertainties and challenges renewing themselves with each discovery, especially with regard to astrophysical cosmology, my most active sub-area. Formal reasoning in search of correct representations of phenomena is extremely energy-intensive, so writing with my hand provides relaxation and a feeling of accomplishment after great intellectual effort. Nevertheless, not with pencils! One important thing for

beginners in physics: never erase ideas or equations mostly if they turn out to be wrong, just pass a dash; this way there is no risk of making the same mistakes in future works.

Something else to learn early is that nothing is more important for reflective work than silence. However, dialogue is fundamental, and pens allow this dialogue between you and yourself saying what you think in another way. For that very reason, anything replaces the pleasure of writing by hand a sequence of calculations, or an analytical argument, just as no choice could be colder and more tedious than reading a digital book instead of the original on paper. Too much technology has two harmful effects: 1) it dumbs people down and 2) makes life less interesting; they merge and feedback the worst results for human beings, that is, the loss of capacity for empathy and sensibility to the things that matter most. I think that humanity is paying a high price for choosing a life full of technological facilities and lacking in simple and true pleasures, such as walking outdoors, or listening to a Chopin polonaise at the end of the day. As for me, I try to maintain a perspective of fruition of the good things that life offers; “we are not here to simply exist, but to live”, someone said!

In my work, there are dozens of sheets of paper written by hand each week before the compilation that will be digitized. There is therefore opportunity for the use of many pens. Some only work at my office table, either because they are retired old warriors, or because the dryness of Brasilia’s climate requires a short dip in water or ink for the initial start of the nib. It is part of the ritual! An example is my Eclipse with 14K gold-filled filigree overlays (Figures (1)) and a wonderfully mysterious solid 14K medium gold nib with a beautiful carved griffon (not the Wyvern griffon). I have written with this orphic nib several times before present work. The softness of the nib and the lightness of the body make it perfect for long texts.







Figures (1) - The Eclipse with 14K gold filled filigree over hard rubber, circa 1930, lever fill.

2.1 *The three main interactions*

The practice of writing, and even maintenance, can happen more wisely if we consider some of the physical theory involved. As far as pen and ink are concerned, a nib is a mechanical device endowed with two small degrees of freedom provided by two independent moving branches arranged in parallel, forming an open straight conduit through which, with the aid of gravity, the ink flows. Under the action of gravity, the flow is understood as a "controlled leak" carried out by the feeder (interface between the nib and the reservoir), just as the descent of an airplane is understood as a "controlled free-fall". From the capillary action that takes place in the whole system, two simultaneous physical processes occur along that conduit, say: 1) the adhesion of the fluid to the branches due to the molecular attraction between the liquid and the material of the branches, and 2) the cohesion of the fluid molecules on its surface, something that rises from the surface tension. Both processes are influenced by viscosity, the fluid's resistance to flowing. In relation to the writer and the pen, there are the writing speed, the pressure exerted on the nib and the contact angles of the nib with the writing surface (here, for those who complain about heavy pens, I regret to inform that what matters is not the weight but the weight distribution, with the center of mass closer to the top of the pen; most important of all is the handhold of the pen, the quality of the nib, and the quality of the ink, of course). Finally, with respect to paper and ink, there is the degree of infiltration of the writing

fluid depending on its viscosity and on the porosity of the paper sheet, a true conflicting relationship between flow and absorption. All of these features must combine harmoniously for a perfect writing.

Briefly, behind the act of writing with a fountain pen, there is a nice physics bringing together mechanical and hydrodynamic features. You do not have to be a physicist to repair fountain pens, but you do need to have the good sense of physics to make what is necessary correctly. Therefore, tinkering with the nib and the supply system is not a task for anyone. Additionally, it is worth remembering that the full functioning of the pen does not only depend on itself, but also on its driver.

2.2 *Engineering the vacuum*

The name "vacumatic" that popularized a series of Parker models intended to specify a supposedly innovative system for filling the reservoir using a vacuum imposed on it. Nevertheless, this is propaganda without commitment to the correct description of the physical facts. The fountain pen feeding process, whatever the system — including the Parker 61 capillary Teflon-coated filler —, presupposes the creation of a vacuum to be filled with ink, and which will later be occupied by air again as the ink level decreases, all under control of the feeder, ingeniously equipped with cannellures that allow this "breathing" of the reservoir. Therefore, what varies is the way of generating the vacuum. The efficiency of the system depends on two basic principles: 1) sealing and 2) suction. I will probably surprise the reader with the following assertion: the best system I know is from Compactor. A large fully fillable reservoir (by the way, one of the largest), perfect sealing, and substantial suction for each pumping made by a relatively robust plastic plunger; simple and effective. Most systems gain in creativity and suffer from the little autonomy they grant to the pen. In addition, the configuration of a filling system with several sealing items applied simultaneously detract from the elegance of the process and annoy the pen owner with more frequent maintenance. Sheaffer, although very creative, has, in my opinion, the worst filling systems (the "touchdown" and "vac fill" never convinced me as efficient systems), with the exception of its great invention, the lever filler. Also, the Snorkel model is a rather odd-looking system, requiring uncomfortable maintenance.

The famous Parker vacumatic in laminated celluloid became very popular, both Americans and Canadians, being great pens today sold at prices ranging from affordable to high (in some cases absurdly high!). From the set I keep, four have been very present in my scientific production (Figures (2)), including an American Major in a rare shade of green with a splendid medium nib (this pen has been used so much that the barrel imprint has almost disappeared!).





Figures (2) - The vacuumatics equipped with 14K gold nibs. From top to bottom: blue Canadian Junior, green American Major (blue diamond on the clip), red American Junior Debutante and green pearl American Junior.

3 *The price-and-value conundrum*

This section has the main function of a call to reason. I have seen some absurd offers for old pens on the internet — several of them badly damaged —, although they are not the majority. Perhaps this results from a mix of the myth that old pens are an investment with the confusing notions of value and price. Value is a cultural construction referring to the importance that people or social group attribute to a given artifact, something transmitted over time by tradition, from generation to generation. It is, therefore, a complex gathering of symbolic intangible assets representing a certain psychosocial condition (for instance, a mystical necklace from the Navajo tribe is of no value to a Catholic). Price is a market convention within a commercial system that monetizes objects based on the materials used, according to their natural properties, utilities and techniques used to manipulate them. In consumerist ideology, it is customary to add to the price the monetary weight of intangible assets — mostly futile — attributed to fame, luxury, status, etc. (abusive prices happen exactly here, due to these consumerist assets). Thus, to bring value and price closer together makes no sense, since they are totally different concepts and, in a way, mutually exclusive since value cannot be universalized as it is restricted to a specific group, while price is not guided by cultural boundaries. Furthermore, rarity is a warranty neither of value nor of price. What scarcely happens is that a fair price can reflect the influence of a value. This is the case with the Parker 51. Millions were manufactured, and, due to their durability, there are still many spread around the world in perfect condition. Therefore, they are not rare, but they are iconic; they belong to an era in which aviation was revolutionizing the connection between people. Therefore, its value was culturally and socially constructed over decades, beyond stylophilia. They are expensive in general but still affordable, unlike showcase pens that inflate prices for futile reasons.

Understanding these concepts, it is necessary to add the fact that old pens falling away simply as a matter of increasing entropy. Pens are finite resources; their materials oxidize, its parts crack; many are neglected and thrown in the trash; there is frequent sacrifice of valuable old pens for the paltry few dollars of the gold nibs. Briefly, pricing old pens is a task that requires moderation. Let us remember that collectors form a very small community, and, within that community, very few are heavy users like me. Most people collect objects for objects' sake, only. Therefore, to pass on the latest pens to those who appreciate and use them, it is necessary: 1) to disseminate the culture of stylophilia among users of modern fountain pens, so that they are also interested in the old ones; 2) to offer realistic prices given the purchasing power restrictions, considering the superfluous nature of the product and the Chinese competition that today yields very well finished pens, mainly Moonman (now Majohn) and Wing-Sung, with quality materials and great nibs at very attractive prices (freshly, my fellow Henrique Ghidetti reported good experiences with Chinese fountain pens). It is good to remember that true fanciers and users of fountain pens are not in search of luxury or status, and are generally people of modest resources, sometimes making sacrifices to obtain the desired pen. Unfortunately, many dealers still treat the acquisitions of old pens as acts of luxury.

4 *My* daily experience

I have never bought a pen that I regretted. Admittedly, at the beginning, I disassembled one or two unrecoverable pens for learning purposes, later reusing their nibs, and I do not regret that either. After all, that is how I became a good maintainer of my collection. In fact, everything began the day I observed a professional dealing with a nib that would not pour ink no matter how hard he tried. I saw him do something completely contrary to what would physically make sense. The nib needs to maintain a pervasive contact with the feeder so that this last one controls the "leak", the flow of ink to the iridium. The aforementioned professional, in his fruitless attempts, ended up moving the nib further and further away from the feeder. I kindly asked him to lend me the pen so I could try it. I simply removed the nib and carefully replaced it, snugly fitted to the feeder. Problem solved! I ended up buying the pen, a beautiful marbled red Parker Challenger, 14K gold fine semi-flexible nib, in excellent condition¹ (Figure 2-a). From then on, I took over the maintenance of the pens, except in extreme cases that depend on the manufacture of certain spare parts.



Figure 2-a – The button-filling Parker Challenger.

¹ Those who think the Challenger as an inferior model compared to the top-of-the-line Parkers really do not know what they are missing, or they do not understand anything about fountain pens. Pens are not like cars. There is no entry model; either the pen is good or it is not.

Maintaining the collection is also a relaxing activity, and it keeps me in touch with all the models. Sometimes a small adjustment leads to me using the adjusted pen the whole day. In addition, as the reader will see, there are many ways to use a good collection.

4.1 *Pens and pockets in a world that neither reads nor writes*

These days it is hard to find a type-Polo shirt with a decent pocket that can host a normal pen. The pockets are floppy, without any structure, in addition to being small, barely fitting a business card. There are those who consider shirt pocket obsolete, pens in the pocket even more so (it seems that civilization is ceasing to read and write, without realizing that, if it continues on this way, communication through speech will soon also become obsolete; more books, less parties, Boutros Boutros!). In this situation, I use preferably my National Security button filler, a small and very well made pen with a cute lion drawn on the body, probably a product from Langs of Liverpool. However, I take turns with an Italian Astura and a German Reform with transparent reservoir, all 14K gold nibs on the fine side of medium, in perfect conditions. Astura was made by the *Società Anonima Fabbrica Italiana Stilografiche* (S.A.F.I.S.), circa 1930; my Reform appears to be pre-WWII, typically a military pen (see all in Figures (3), Figure 4, and Figure 5). I recently purchased a button filler Parker Duofold Junior, in green, gold and black ribbed colors, made in United States, around 1945 (Figures (2-b)). It is a delightful 14K fine nib little pen. I have not used it much yet, but it will certainly be part of the relay between the little ones. These pens are not going to suit everyone, but, for the ridiculous pockets offered today, they are great and very practical.



Figures (2-b) – The button-filling Parker Duofold Junior.



Figures (3) - The trio of little ones: From top to bottom, National Security, Reform and Astura; National Security's friendly lion.



Figure 4 – The 14K gold nib of Astura.



Figure 5 – The German Reform.

4.2 *A grateful surprise: The Mentmore's Bonzo*

Even with a pocket pen, I always carry a case with everyday pens in my briefcase for use in the academic office. Lately, I have been really enjoying a little-known pen: the Mentmore's Bonzo (Figures (6)). This is a truly surprising pen. I bought it online, without knowing the brand, making a kind of bet based on its good appearance. It is a nice hard rubber fountain pen crafted in *guilloché*. In a market strategy, Mentmore acquired the image concession of the popular dog Bonzo (and also the right to use the trade name, I suppose) to promote this model, managing to make it widespread, mainly due to the innovation of the interchangeable nib that was later reproduced by other brands. Here is a good example of how the pen market worked; Mentmore paid a fee to commercial artist G.E. Studdy to use the image of the cartoon dog Bonzo. Later, its innovative interchangeable nib system was adopted by the Esterbrook, Osmiroid and Platignum pens. I think that copying, in the worst sense of the word expressing plagiarism, does not seem like the correct idea in the old competition between brands. There were good ideas that simply established trends to be followed. Sales success, as always, was a matter of marketing and who came out ahead.

The Mentmore's Bonzo is excellent, with great ink flow and a screw cap also on the top of the pen (in my opinion, all pens with screw caps should be like this, as the nice and incomparable Xezo, some of the few modern exceptions in my collection). Apparently, there are not many left, such is the rarity of finding it on offer. I use it in turn with others in my offices.







Figures (6) – The Mentmore’s Bonzo. Note the screwing top.

4.3 *Brazilian pen with German look*

If there is one guy I admire from the first half of the 20th Century, it is Paul Buschle, pen repairman and creator of “Compaktor”. With his first patent registered in 1939, he began mass production in his own factory of the so-called Meteor 4 Kubik fountain pen. Unfortunately, the factory did not survive the bombings of WWII, and the enterprise did not bear up the post-war German economic crisis. However, the dream remained alive until the opportunity arose here, in Brazil, thanks to his contact with Editor Paul Bluhm. With the optimism of the national industrialization phase, in 1954 his younger brother Erich Buschle registered the “*Cia. de Canetas Compactor*” in the municipality of Nova Iguaçu – RJ, initially assembling pens with parts coming from Germany. The full story is available at the Compactor website [2], a successful company always looking to the future, today in full operation.

Strangely, in the last three decades, justice has not been done to Compactor in our stylophilia, although it is not difficult to find them in antique markets. There does not seem to be much interest in them among our few collectors (perhaps because it became a Brazilian brand?). I do not like to think that way, but what other reason would there be for the lack of interest in such good pens? Brazilians tend to be susceptible to ideologies, prejudgments and arbitrary ideas, often adopting the stereotype that only imported products are good. One of the worst and most disastrous examples of this was the uncritical adoption in the late 1960s of so-called Renewed School Mathematics, copying North Americans who then embraced set theory as fundamental to data science, in

detriment of the rest of fundamental mathematics. This erroneous and purely ideological choice led us to the current and notorious mathematical incompetence of Brazilian education, and, consequently, to our scientific and technological delay compared to advanced nations.

I honestly hope I am wrong about the relationship between Brazilian collectionism and Compactor (in which case, I will keep this written in ink so that, hopefully, I can cross it out and never make this mistake again!). Certainly, many pens were discarded with the dominance of ballpoint pens, but, while so many other brands disappeared or have been amalgamated with others, Compactor diversified its production line without losing ties with its origins (the fountain pens are now from German manufacturing partner Schneider, sold under the Compactor brand with modern and youthful designs).

The model I like most is my Super GT (Figures (7)), Brazilian, with a covered nib similar to the Parker 51, fine writing, gold-plated screw cap and the typical barrel with a green transparent section (demonstrator) of German pens. As I said before, the supply system is the best of all: a robust and efficient plastic plunger, perfect insulation and one of the largest ink reservoirs. I use it a lot to write mathematical symbols and short footnotes.





Figures (7) – The Brazilian Compactor and its pumping system.

4.4 *A choice for bedside notebooks*

Burnham (by Harry Burnham) was a British brand characterized by the use of casein, more specifically *galalite*, instead of traditional celluloid. *Galalite* (from the Greek “*gala*” = milk, and “*litos*” = stone) is a biodegradable natural plastic polymer obtained from casein, a protein found in milk. It was synthesized for the first time in 1897 by Adolph Spitteler and Wilhelm Krische, and was widely used until the middle of 20th century for the manufacture of poker chips, button sets, pens and several artifacts. The low cost and ease of production, associated with Burnham's smaller nibs, explain the affordable prices of these pens compared to their British competitors. However, *galalite* deteriorates if not produced and preserved correctly, which has led to the disappearance of many Burnham. But those that were carefully manufactured, with further immersion in formaldehyde during two days in order to give greater hardness and durability to the *galalite*, are excellent and even reflect more beautiful visual effects than many brands made with celluloid. In addition, if replacement is needed, Osmiroid and Esterbrook nibs fit well this pen. I have an original burgundy marbled Burnham 55, Broad Burnham 14K gold nib, two rings cap, in perfect conditions, with incomparable shine (Figures (8)). I got all my philosophical ideas down and I like to use it for nightly notes.





Figures (8) – The Burnham 55 in beautiful *galalite*.

4.5 *The Eclipse fountain pen and its eclipsed story*

Eclipse Fountain Pen Co. (1903-1962) has a somewhat confusing history. It is one of my favorite lesser-known brands. Therefore, I will dwell a little more on its origins. There are controversies, which, in fact, is quite common among the smallest pen manufacturers and the lesser known. A lot of competition and the impacts of the two World Wars, leading to the division of assets and cost reduction, are among the most critical factors. Also during crises, smaller companies were often absorbed by larger ones; others broadly disappeared in the Depression, and so on. Eclipse appears to have started its production in 1903 by Marx Finstone, considered a creative man, in San Francisco, Calif., at 42 E. Further factories were installed in New York and Arlington, and offices at Houston St and later in the Chrysler building in New York City, making fountain pens of medium quality in hard rubber and plastic, mostly oversized flattops. Posteriorly, they went on to produce superior quality pens, including the first mentioned in 14K gold filled filigree overlays (Eclipse was one of the first, if not the very first brand to produce this design), in addition to several good sub-brands, but I can't say whether all these last happened only in the peak phase of production — well before the 60s —, at a Canadian establishment or not, whether before or after the demise of the US plant. The production sequence is not precise, and there appear to have been offices in Chicago and Toronto, before definitive settlement in Canada. According Richard Binder, Eclipse was very innovative, pioneering enhancements in fountain pen production, including the process of laminating celluloid sheets [3]. I really appreciate the brand, and I am still going to purchase a few more. My second item is a good lever fill Senior 5 3/4" capped in "Big Red" style, red/orange plastic barrel and cap, with black plastic ends, circa 1930 (Figures 9)). Gold-filled hardware, 14K medium semi-flexible Warranted nib, quite common in Eclipses.

It is surprising that a plastic pen, almost a century old, is in such good condition, no cracks, without stains and with the original color preserved, despite having been visibly used a lot. It is a light pen with no great pretensions to refinement. I write with it quite often, mainly because of the great ink flow. One can still find some via eBay, but I have not good memories of that site. I do not like auctions, and the times I tried to buy a pen, either the seller had restrictions, or he did not deliver to Brazil. Furthermore, the handling charges to Brazil make the pens a lot more expensive than they should be.

Eclipse experienced considerable expansion during the 1920s, creating sub-brands such as Marxton, Jackwin, Park Row, Monroe, Deluxe and, probably, Justrite. I will talk about the latter.





Figures (9) – The "Big Red" Eclipse.

4.6 *The guy with Parkers and British pens in his head*

"Philosophical science is a path to other sciences, but whoever wants to stop there remains in darkness."

Saint Bonaventure

The scientific mind can work in mysterious ways. For me, it is common to associate the object of study with the pen we use. From there a pleasant and lasting symbolic relationship can be created. My Master and two PhD lectures were mostly written with Parkers 51, adding significant contributions from a nice olive-green-marbled Stephens leverfil 270 and a red-marbled Summit S.125, both excellent British pens. Ever since, most times I start a new job with these pens.

There is not much to say about Parkers 51 other than what has already been said (Parker Collector website [3] is the most complete information resource about all Parker models). They are my first choices, and, after abandoned the vacuumatic system, they seem built to last through the centuries. The various items that make up my collection will certainly pass on to my children and, perhaps, my grandchildren. They are practical,

robust and elegant pens with a classic look and attractive colors. No wonder the 51 design has inspired so many brands, even today.

Summit S.125 is an elegant lever filled pen made by Langs, with semi-flexible gold nib. My exemplar, dated to the late thirties, still maintains its original gold plating on the straight lever, the clip and the cap ring. Stephens leverfil 270 was issued in 1946, and at that time it is difficult to know the brand's exact commercial relationships with other manufacturers, since, apparently, Stephens has always depended on partnerships. Its lever filler mechanism is one of the best I have seen, and the fine flexible gold nib sounds silk on coated paper, even more using my glorious old Stephens blue ink from the early 70s, unbelievably still in good condition.

Each one in its own style, a wonderful set (see all in Figures (10) and (11)). To tell the truth, I do not adapt to just one pen, ever. Right now, I am using a green 51, medium writing. You could say that, more than a collector of pens, I am a collector of writings, adding variety to my papers.





Figures (10) – Some of my Parkers 51: The first is a scarce old vacuum; below, two aerometric exemplars (all used in my Master and PhD lectures).





Figures (11) – The outstanding Stephens and Summit. Parker's famous emblem, the arrow-shaped clip, created a style followed by several brands, as seen on the Stephens' cap.

4.6.1 *Parkette semper Parker*

*“Examine your words carefully and you will find that even when
you have no reason to be false, it is very difficult
to tell the exact truth.”*

George Eliot

Unfortunately, finding a mathematical trick to deduce, from a broader symbolic structure, expressions formally identical to well-known physics equations does not necessarily mean that we are unifying real phenomena. The same holds true for the emerging massless spin-2 as a consequence of quantizing the dynamics of relativistic string states, conveniently interpreted as the graviton — the hypothetical messenger of the gravitational field, and never confirmed experimentally —, often called upon to assume the role of pointer to a unified theory of quantum mechanics and gravitation. As brilliant as superstrings are — and “the mother of all superstring theories”, the M-Theory —, symbolizing an idealistic and romantic obsession for a unified vision, I see in them much more mathematics than physics. I am not a detractor of superstrings (just do not give me that idealistic and naive slogan, “the universe is mathematical”!). I just think that virtually solving the theory non-perturbatively using pure mathematics, and then possibly reducing it down at low energies to a familiar theory of ordinary particles seems to me more like a word game with technical manipulations. This sounds very artificial².

I have no interest in debating superstrings, mainly because I trust more in the future of the theory I advocate [12]. In fact, testing superstrings is a huge challenge, but I do not worry about its metaphysical aspects. Metaphysical conjectures are fundamental as long as they bring us closer to empirical feasibility. When the Higgs boson was confirmed, I was excited because many years earlier, studying supergravity, I had imagined a mass-granting mechanism between an AdS bubble (the very environment of the hypothetical gravitinos) and a Minkowski space to set up gravitino-graviton supersymmetry (certainly a metaphysical model in deal with suppositional particles that never came to light). If superstrings consolidate in physics, beyond pure mathematics, it will be a very welcome victory for science, just as the success of any other theory will be, even one that finally ends for the last time the dream of a dubious unification. For my part, I

² I have the feeling that we “force the envelope” to accommodate nature to our will (a fundamental mistake!). Putting bananas, apples and oranges all together in a basket does not mean that the basket unifies the fruits.

prefer dedicating myself to describe a gravitationally continuous universe characterized by a four-dimensional space-time manifold in accelerated expansion (at the time of writing this excerpt, I am using my Mentmore's Bonzo). No offense, I leave the multiverses to those who perhaps have the strange preference for asking other universes — deduced not from facts but from mathematics — as a way of helping to resolve the problems we have in the only universe we really know, using a huge number of known Calabi-Yau manifolds³ associated with another enormous number of possible superstring theories (at least the accelerated expansion is testable!). I do not think that the universe is mathematical, but rather that mathematics is the best tool we have to describe it as long as it is associated with a rigorous physical semantics, without tricks.

Furthermore, what is the problem with having two theories that are incompatible because they are aimed at different scales of reality? Gravity is a very different interaction from the others (I do not even like to call it “force”). Einstein's theory forms the basis of cosmology and conceives space-time as a continuous woof; it would be nonsense to quantize it conventionally (otherwise we would have an aberration!). At the other extreme, the N dimensions curled up led to the Yang-Mills field, the key to the Standard Model. What we should do is understand under what circumstances the effects of one model prevail over those of the other, rather than getting lost in mathematical riddles. Both do not reflect things in themselves, but only representations of the world in different instances⁴.

³ To give no more than a quick reminder of the role of these manifolds, from my first notes about string theory, I prepared a brief seminar on Calabi-Yau manifolds starting with a look at the general theory of Kähler manifolds (CBPF, 1997). A Kähler manifold is a Hermitian manifold M endowed with a metric g , say (M, g) , so that, on a chart U_i ,

$$g_{\mu\nu} = \partial_\mu \partial_{\bar{\nu}} \mathcal{K}_i,$$

where \mathcal{K}_i is called “the Kähler potential” of the Kähler metric. In addition, we have

$$\begin{aligned} \frac{\partial g_{\mu\bar{\nu}}}{\partial z^\lambda} &= \frac{\partial g_{\lambda\bar{\nu}}}{\partial z^\mu}, \\ \frac{\partial g_{\mu\bar{\nu}}}{\partial \bar{z}^\lambda} &= \frac{\partial g_{\mu\bar{\lambda}}}{\partial \bar{z}^\nu}, \end{aligned}$$

and the Kähler form $\Omega = i\partial\bar{\partial}\mathcal{K}_i$ on U_i .

A Calabi-Yau manifold is in short a compact Kähler manifold with vanishing first Chern class. As superstring theory lives in 10 dimensions, six of them have to be “compactified” in order to justify why we do not perceive more than four. To do this, string theorists suggested the use of a 6-D Calabi-Yau geometry, for which the intrinsic properties of elementary particles remain hidden (a very interesting point, by the way!).

⁴ Personally, I prefer to seek an understanding of the continuum that is in the essence of all things, the only one capable of giving us, so to speak, an ontological unification that makes sense. I have heard that most physicists do not like

In fact, the conversation between physicists and mathematicians rarely works because they are different mind structures⁵, and this difference is well recorded in the history of sciences. Riemann had everything in his hands with the purely geometric explanation of the concept of “force” he developed to arrive at a general theory of gravitation, but as mathematician (not physicist), he failed to perceive the natural principle underlying the phenomenal description. A physicist (not a mathematician) like Einstein had to appear to get Riemannian geometry to construct a theory of gravitation from his essential physical principle that Riemann blurted out: the presence of matter-energy determines the curvature of the space-time surrounding it. Thus, space-matter is equivalent to time-energy. I do not see rationality in forcing a continuum theory that works very well at large scales to wear a quantum outfit at all costs. It is like forcing the universe to conform uncritically to the Big Bang, even when you know that the current theory has faced some worrying setbacks from James Webb observations (save the theory, even against the facts!?)⁶. Be that as it may, the focus on physics is lost when one insists on accommodating a theory that is radically different from the others within the same general math framework. I still see that the universe is simpler than it might seem, and, thinking this way, I decided to develop a theory of space-time that would describe the true cosmic woof of everything, and not an idealistic theory of everything; and, the first drafts of my theory were pleasantly written with a Parkette in marbled red-grey pattern (Figures (12)).



Parkette is a sensational pen. It was created initially with steel nib as a cheaper alternative Parker model, such as a popular sub-brand⁷, during the economic crisis of the period between the World Wars (in ascending order of prices, it would be Parkette, Challenger and Vacumatic, all sharing the same era). However, due to the good receptivity achieved in the market, it gave way to an enhanced model. I have several, but the most

philosophy, preferring only to do math without further reflection on what is being done. Luckily, I do not think so, and I believe the interest in philosophy is changing among physicists. I am disappointed to see colleagues who clearly do not understand the role of philosophy in advancing physics. I think they won't get very far if they stay like this, and I hope that arrogance gives way to reason and modesty. The philosophy of physics is the only effective instrument for improving our theories in that it keeps us capable of critical thinking, cautious and humble enough to give up our most cherished ideas if necessary to truly advance physics. Perhaps the fear of renunciation is the main reason why Mario Bunge's critical and profound work is not cited in the literature, and why those who seek logical and philosophical foundations in Karl Popper's work for their arguments are sarcastically called "Popperazzi", a regrettable fact. There is no place for "gurus" in physics, but rather a place for debates in which free thinking, devoid of vanity, can flourish and bring new insights. I do not believe in closed minds at all.

⁵ I have a mathematician friend, a researcher in topology, and our conversations go well until we talk about topology. Then, we look like two tourists trying to understand each other's language without much success.

⁶ I am also not a detractor of the Big Bang theory, but I think we need to review it.

⁷ Contrary to popular belief, sub-brands are market strategies and can be more expensive or cheaper, depending on the goals established.

attractive is the dodecagonal green marbled Parkette *De Luxe*, a pretty well made money-saver with fine-to-medium 14K gold nib, gold-filled lever, clip and triple cap rings. I gave it an important mission, and when I see it today, semi-retired, I think about its different geometry and how necessary it is to think differently in contemporary physics.



Figures (12) – The Parkette *De Luxe* in dodecagonal green marbled celluloid.

4.7 *Nice unbranded pens*

I am fond of mysteries, and, for my pleasure, old unbranded fountain pens are not uncommon. Between the 20s and 30s, they proliferate. Some were presumably made by well-known manufacturers when sales fell.

These two, for instance, have survived to show off eye-catching and handsome carved Greco-Roman and *guilloché* nuances with quality superior to that of many more expensive pens (Figures (13)).

I like to visit antiques fairs. You can always find a pen here or there. I have been buying excellent fountain pens at fairs in Brasília and Rio de Janeiro. I found the first nameless model below perfectly safe and lost among trinkets. This is a very well finished pen. At first glance, it resembles an exemplar from Kosca, a fountain pen manufacturer set up in Italy by business people from Germany. The 14K gold flexible nib appears to have been inherited from a Parkette *De Luxe*, which makes its roots more obscure. However, over the years, Kosca has become a benchmark for quality overlays, including Parker in its clientele, a fact that may indicate some kind of partnership in supply of components. Another possibility would be a vintage French Stylochap⁸ with a replacement nib. Either way, it is a beautiful fine-writing button filler pen, great to indite equations. To form a pretty good pair, I recently bought the second one from the collector and dealer Fernando Maurano Oetterer, who I have already mentioned before. The pen, also most likely Kosca, is beautifully crafted, being equipped with a medium Warranted 14K gold nib. Both are small pens and may be used into my squishy pockets.



⁸ There is not much information about this brand. It is known that pen production began at the end of the 19th century (presumably in 1890), with models honestly influenced by Waterman. In the 20s and 30s, the brand began the transition from ebonite to celluloid, although it maintained some metallic models. Judging by the appearance of the clip, my copy must belong to the 1920s, as during the 1930s the clip began to have a more rounded shape with OLD CHAP printed vertically. There are reports that the company, whose factory in Paris was called “LA MANUFACTURE FRANCAISE DES STYLOCHAP”, won 3 grand prizes and 5 gold medals for its products at specialized industrial festivals. The company stopped producing writing instruments in the 1940s, but someone, supposed to be an heir with resources, launched from 1990 onwards a series of instruments in limited editions of 100 to 1000 copies of the brand's most famous models at the beginning of the 20th century, difficult to find and with slightly inflated prices.







Figures (13) – The missing brand pens, probably from Kosca.

4.8 *The two cultures*

It turns out that, in addition to being physicist, I am architect-urbanist. On one hand, physics, the science at the beginning of everything; on the other, architecture-and-urbanism, the art and science of shaping man's space. Mechanical pencils are also part of my professional life. Therefore, combos are resourceful options on days divided between equations and projects. Furthermore, for physicists, mechanical pencils are useful for fast writing while in transit on Uber, avoiding accidents with the nibs. The combos I use most are Justrite Pen & Pencil, Newark Pen Co. and Diamond Point, all lever filled (Figures (14)). Justrite is almost certainly a sub-brand of Eclipse, judging by its general features (name printed on the clip and typical Eclipse oversized format). The exemplar I have is a beautiful celluloid in tortoiseshell (I have seen an Eclipse with this same pattern on eBay), solid gold Warranted 14K #6 medium flex nib, also common in Eclipse. The Newark Pen Co. is a nice burgundy with 14K medium-to-fine nib. Finally, the Diamond Point is a rare lapis lazuli, 14K Warranted fine nib. The only drawback is they are all fueled with graphite 1.0, which is difficult to find. The simplest solution is to take the 1.2 leads and sand them evenly with a very fine piece of sandpaper lightly compressed between the thumb and forefinger, then rotating the leads with the other hand until they fit the cannon. In particular, when visiting clients as architect-urbanist, I like to take the Justrite in duet with my

Conklin All American (one of those few concessions I make to modern pens), also in tortoiseshell pattern, such as a personal marketing choice.









Figures (14) – The combos as described above, and the duet Justrite-Conklin.

In summary, combos well represent the science-and-art duality as a kind of symbol of the intersection between the two cultures that should never be separated.

4.9 *Diamonds in platform*

My current research in cognitive neuroscience has been written with different pens as a way of adding a ludic component to the hard work involved. The problem is that my theory presupposes a physical proper time of the mind that is not always congruent with the external time marked by the clock. To test the theory, it will be necessary to conceive an experimental design that allows physical and psychological time to be separated, which constitutes an immense qualitative research challenge. Just checking the consistency of this testing program is a real headache! Thanks to my fountain pens, the weight of the challenge is lessened with each change of nib on the sheets of coated paper, and with each supply of violet ink.

The best way to test a theory is to try to debunk it, without mercy, by cycles of consistency checking. This requires courage, detachment and abandonment of personal vanities. Detachment is a difficult exercise in a

materialistic society given to extremes of consumption. As human creations, scientific theories also can become objects of consumption, pride and status attainment, which makes scientific detachment a painful prospect, especially due to the fleeting nature of human life. For my part, I am trying to refute my theory, and with each attempt, I improve the design of the testing program. At some point, I will consider the result satisfactory, although always provisional.

Diamond pens were called up to fill my drafts on that subject after a long layoff. Diamond Point, better said (not to be confused with Diamond Medal from Sears, Chicago), was an imposing New York brand that, unfortunately, is now gone. I believe it closed its activities in the mid-1950s. Some pens that remain are splendid. In addition to the lapis lazuli combo I showed previously, I have two magnificent exemplars, one from the 1926, Simplex in mottled red hard rubber with screwing top, lever fill, Warranted 14K medium flex nib, and another in black, oversized, from the early 1950s, with medium flex Diamond #8 14K solid gold nib, also lever fill, both very well finished (Figures (15)). From the models I've seen, there are ups and downs in quality throughout 20th century crises. I believe that, in a last gasp, Diamond Point scrambled to produce the latter model mentioned above.







Figures (15) – The lever-filled Diamonds.

In general, Diamond Point remained a quality brand until it disappeared while other brands declined into the fifties with deplorable products of which it would not be elegant to give examples.

4.10 *Time in a bottle*

“Set the time on the clock; but, what marks eternity?”

Walt Whitman

Although I am not what one would normally call "a religious man" (not in the sense of a Sunday worship attendee), faith is something that moves me and I understand it not as something affirmed in temples, but as the result of a constant exercise in contemplation of eternity, something that is probably beyond common

understanding. I do not suffer conflicts because I am a scientist and have faith. After all, no matter how much one does not want to admit it, science is based on belief systems too, and it would be a waste of time to insist on controversies that will never change human nature. What matters is talking about science and faith in their respective domains.

Eternity is the virtual essence of what could be, what is, and what was. Time has always been my passion in physics. I took the idea of its intimate connection with energy to its ultimate consequences when I developed my first sub-Planckian theories in cosmology. However, it was by addressing quantum entanglement that I postulated a transformation of the geometric relationships to which we are accustomed to a configuration suitable for the quantum world, where interactions between two entangled "particles" occur freely in time, now, toward the past, or toward the future [12-a].

Quantum entanglement (QE) constitutes a true mystery, which, like others in quantum mechanics (QM), is treated and disseminated as if everyone understood it. It remains controversial among physicists, some of whom frankly admit they find it such a crazy thing as a chimpanzee writing a poem using a computer keyboard. In QM, we get used to it; things happen and fit predictions without us fully understanding them. Basically, QE means that any two "particles" (in quotation marks because in my view this is an anachronism, at least in cosmology, although the concept of particle still remains in use) once in contact (created together) will continue to act as if connected, no matter how far they move away from each other in space-time (for instance, the odd long-range interactions between two entangled photons sent in opposite directions along an optical fiber). I decided to tackle this issue as the target of my model of symmetric transformations between space and time, addressed in my second PhD thesis (it deserved academic prominence because it was a disruptive work in theoretical physics). Although the thesis was written with Parkers and British pens, as I said, my first notes on this subject were made with an unknown pen in the southern hemisphere, a Corbin (reinforcing the fact that my involvement with the work creates a symbolic connection with the pens used).

Corbin, from Albany-New York, is a rarely seen pen company. Nobody seems to know about its origin. It has been for sale for a long time on eBay a nice vintage lady's ring fountain pen and pencil set from the 30s, with original 14K nib and visible imprints on pen's barrel. I would buy it just for the beauty of the celluloid in a very light green pearl, but the model would not be practical for my purposes.

My exemplar is an elegant and very rare marbled green/black celluloid pen, with Warranted 14K First Quality stub nib in full functioning, perfect imprints, probably from 1930 (Figure (16)). It was one of my first non-Parker pens. A brand forgotten in eternity; a pen as an empty small bottle filled by the decades; nothing more appropriate to talk about time.



Figure 16 – The lever-filled missing Corbin.

4.11 *Refreshing the mind*

This is a good opportunity to rest my mind from calculations. Recently, I was invited to write a short biography of my late father, Sylvio Serpa Costa (economist, graduate in literature, linguist and classical guitarist) to be part of a biographical book dedicated to the guitarist José Augusto de Freitas, by Jorge Melo & Celso Faria, both researchers and friends of mine. My father was a kind of disciple of Freitas, and became his great friend. Writing this biography has brought back faraway happy memories of my childhood that remained hidden for a long time, and that I now record in text so that they will never be lost.

I am writing the biography with Dupont and Swan fountain pens (Figures (17) and (18)). Dupont is a brand that has become famous for its finely lacquered pens. There is little to add to this fame; they are exceptional writing instruments. I have two, in Classic model, one in beaded gold filled, the other in dark blue lacquer and graced with a signature in red, probably from the Asian lacquerer artisan himself, both with medium 14K gold nibs. They are at my collectible age limit, that is, the end of the 70s. I had not used them for a few weeks and, lo and behold, the ink was immediately flowing! I would never give up these pens. Contrasting these beauties, none other than my very cool Swan in jade green, lever filler, correct inscriptions on the barrel, with medium gold nib Swan 4 14K Mabie Todd & Co.





Figures (17) –The Dupont duo and the artisan's signature detail.





Figures (18) – The graceful jade green Swan Mabie Todd.

4.12 *A question of balance*

In my opinion, within its endless list of models, the lever-filled Balance was the great and fabulous creation of Sheaffer. I think no modern pen comes close to the comfort of this incredible pen. Curiously, compared to other brands, Sheaffer has never been a much expensive, even with the refined finishes that made it close to jewelry. As I highlighted, the creativity of Sheaffer is unquestionable, and the lever fill became the most iconic and applied system, whilst with its limitations. However, Sheaffer's jewelry touches were lost to the unnecessary complication of its further filling systems (despite this, I greatly appreciate the inlaid nibs).

The Balance is elegant, robust and extremely pleasant to write with, showing the center of mass well positioned with the cap fitted at the top. I have two (Figures (19)), one of them being the commemorative rerun from the 90s with converter, in beautiful multicolor China lacquer. Needless to say, the 14K gold filled medium nibs are scrumptious. I have not used them for a while, so I am considering writing the final parts of cognitive neuroscience research with them.



Figures (19) – The Balance jewelry (note the luminous marbled detail below).

4.13 *The gentle giant*

The vintage Postal pens are truly iconic due to the fact they were only sold by mail. Mine, dated 1926, has a 14K gold flexible nib, with worn iridium, adapted for stub writing (Figures (20)). It is a big pen, with the biggest reservoir I know. The ever-wet nib allows for a nice writing on coated paper, as if the pen was gently gliding over the folio. The fragility of the former transparent celluloid led me to manipulate some gold to make a repair to the barrel. As expected, the barrel broke near the dropper because of the typical cracks in the celluloid. The solution was to apply a plated strap reinforcing the barrel's bonding. I thought the result was very good. As for that serious limitation, there must have been very few Postal still in use, and even so, they probably had the barrel replaced by acrylic. The weakness of the pen means I do not use it much, and then only in my home office, although I appreciate it very much.





Figures (20) – The Postal with the gold plated strap.

4.14 *My modern exceptions*

There are few modern pens that impress me, mainly because today's nibs all look the same. This does not mean they are bad pens, just "globalized". Many are good writers though not exceptional in any way. Some are sold at insane prices, others feature bizarre designs (postmodern bad taste has prevailed!). Nevertheless, a couple of brands have added value to my professional history.

4.14.1 *The awesome Xezo*

Among the modern, vintage classic designs of Conklin was reprised by the nice All American collection, from which I have the exemplar exhibited in Figures (14). I recently bought two serialized Xezo⁹ (pronounced "Zee-zo"), one of them, the *Maestro* in glorious natural *pāua* seashell abalone¹⁰, which I really like; style in spades! I was raised on the beach and I love oceanic themes, something very evident in my tattoos. The second is the Xezo *Maestro* diamond cut, Swiss lacquered, handcrafted platinum plated, *moldavite* green (the glassy green mineral *moldavite*, believed to be formed by meteorite impacts, makes this pen have everything to do with my astronomer profile). They are splendid pens — not cheap, but still relatively affordable —, handmade with the best materials, German 18K gold filled fine nibs, both with screw cap and top (outstanding!) and ink always ready in great flow (Figures (21)). Of course, the materials used make them heavy, but the center of mass is correct. I closely examined all the details of both models, and I can say that, in terms of finishing, they are perfect pieces. In particular, considering that natural abalone imprints are unique, regardless of the serial number each *Maestro pāua*-shell pen is truly unique (according to reports, only five hundred pens of this line were produced). From my experience, these pens are superior in quality and design to most of the Mont Blanc, Aurora and Waterman normally seen in stores, with much fairer prices, a fact that meets my price/value dialectical vision (in the first case, the value of oceanic pattern for me *versus* price, in good cost-benefit ratio). Suggestive *art nouveau* touches make these pens very attractive writing instruments. Now, they are still used sporadically, but I intend to take them more expressively in my future works.

The reader may have already realized that I am not one to make recommendations of brands and pens, as each individual has its personal habits and preferences that characterize the particular way in which he interacts with the real world. So, for everything I think, I can only say that I will probably buy another Xezo model soon.

⁹ Xezo is an American brand that produces finely crafted items, including pens, using top quality materials.

¹⁰ Sourced at New Zealand, *pāua*-shell fishery is one of the most sustainably managed in the world.









Figures (21) – The Xezo in their glorious designs.

4.14.2 *An aristocratic pen*

Graf von Faber Castell follows a tradition spanning many generations, culminating with the famous Count Anton-Wolfgang von Faber-Castell (1941-2016) being awarded several honors, including the Cross of Merit 1st Class of the Order of Merit of the Federal Republic of Germany for his commitment as eco-manager. Evidently, the pens add value coming from the long tradition and, in recent times, from the image of Count Anton-Wolfgang. Within market logic, this means “exorbitant prices”.

Unquestionably, the expensive Graf von Faber Castell is a good and beautiful fountain pen. It merges sobriety and modernity without resorting to bad taste. In many ways, I consider it superior to most Mont Blanc. I have one with a medium nib and excellently 14K gold filled, being one of the most attractive in the Graf series (Figures (22)). With the cap fitted at the top, the center of mass perfectly equalizes hand movements, making the act of writing very pleasant. Today, I use it in loose like the Xezo, but it was present in many papers I published between 2021 and 2022. It came into my collection from a welcome exchange with a collector friend, but I confess that, with the prices charged, I would not be willing to buy another.







Figures (22) – The fine gold plated Graf von Faber Castell.

4.14.3 *The riteless capless*

A fountain pen contains a greater meaning than the object itself. There is the ritual of capping, filling, cleaning, etc. As much as I find a capless pen interesting, I think they lose a lot of that ritualistic aspect. After all, without a cap we are left with the mechanism of a ballpoint pen and an uncomfortable way of filling.

The way I think the world of fountain pens, there are no copies of models, but rather trends marked by the inventiveness of the most creative minds. Although some people see them as something new, the first capless pens date back to the 1920s, including the Pento Capless from the British company W.J. May & Co. Ltd. The idea had some success, but only much later did Pilot resume the project, launching a model with an unreasonable price (as one can see, the capless configuration has not become very popular over the years). Lamy also ventured with an approach that, in my view, is aesthetically somewhat crude for the price charged. Forthrightly, I see no reason for such high prices. These pens do not have any aesthetic appeal, in addition to saving on materials, as they do not have caps. Part of the job, I had access to a Chinese capless Majohn at a more than reasonable price (Figures (23)). The pen, made of metal, follows the same general design as the Pilot. It displays a beautiful fish scale pattern, and was delivered in a complete nice case with all supply options (dropper, converter and cartridge). The stainless steel fine nib is excellent, confirming the quality of many modern Chinese pens. In

short, this Majohn is a great pen within the limits of the capless project. With all due respect to the famous brand (I have a beautiful Pilot *Lucina*), I would not pay the current price for a capless Pilot, not even dreaming!





Figures (23) – The capless Majohn.

5 Lastly: Some of my oddities



Figures (24) – In the first photo, from left to right, a German Optimat, an unbranded combo, and an oversized Accurate.

These pens form a truly unknown trio. My Internet searches were fruitless regarding Optimat and Accurate. The first, piston filler with the typical Pelikan-like clip, must have been one of the many smaller German brands assimilated by the big ones simply for eliminating competition. Remembering the Parker vacumatics, its inscription on the barrel is perfectly legible, and the transparency of the celluloid is great. The second, a nice “Big Yellow” lever filler, suggests a sub-brand of Eclipse (I saw two offered on eBay, but no additional information). Finally, the unbranded lever filler combo, at the center of the trio, is a big and robust writing instrument in beautiful multicolor celluloid, Warranted 14K gold plated nib. They all offer a pleasant experience on the folios. I tend to use them randomly for general notes in my daily workbook.

The Optimat came with a strange chrome nib, probably aftermarket. It was heavily oxidized and stuck to a dried glue-like crust that prevented ink from flowing. I had to disassemble it to replace the nib with a new Warranted 14K gold plated (Figures (25)). Thus, the pen acquired the dignity compatible with its beautiful celluloid.





Figures (25) – The German Optimat with the new nib.

6 Closing words

*“Who can no longer experience astonishment
or surprise is, so to speak, dead;
his eyes are dull.”
Albert Einstein*

So there you are. Always consider that fountain pens are objects of enchantment precisely because they are instruments of sensibility and connection between mind and hand to provide nice records of our ideas, something crudely and coldly imitated by computers. I think that everything, the taste for reading, for new things and for knowledge, begins with the pleasure of writing, which will become increasingly rare from now on. Paradoxically, in contrast to this trend, now manufactured and good quality fountain pens, even in mass production, are becoming more affordable; things from a chaotic civilization, who knows!

This essay recounts the personal experience I have with fountain pens throughout my professional life as a scientist. Many other pens are part of my collection, but I tried to restrict myself to the most representative ones from my daily research work. Additionally, I tried to maintain explicitness about the fact that I do not collect for the sake of collecting; I am a hard user. Furthermore, I hope I have implied the idea that it is much more fun and purposeful to explore the past, the first successful brands, trying to preserve them not only in memory, but also in practice while there are still some. As much as readers may find strange the absence of large pen manufacturers such as Waterman, Mont Blanc and Aurora, that was just because these were not significantly present in my back pages, although I have some and recognize they are definitely decent pens, but nothing earth shattering in my opinion. However, the ones I have from these brands are mainly from the late 70s, when nibs became increasingly indifferent and industrialized. Flexible and semi-flexible gold nibs are practically gone, and the few that one may find are faint echoes of the high-quality gold nibs of the past. In addition, older models of those pens in good condition are, in general, offered at abusive prices in detriment of the dialectic between value and price as discussed, greatly affecting the cost-benefit ratio. In this way, many pens are out of my price range, and, sincerely, I am not tempted to buy any, principally in view of my understanding of what a fair price would be. For those who enjoy coated paper like me, flexible nibs gain some relevance. However, the flexibility requirement seems to be something difficult to achieve in today's technological world, and seems to be one more item contributing to the ridiculously inflated prices of some old flexible-nib pens now offered. I hope current manufacturers can bring back the old passionate charm of the flexible nibs of yesteryears, and, perhaps, we can buy vintage pens only for their beauty and historical value, as easily as the absolutely cheap pens of today.

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