

## PRESENTATION

### BACKGROUND INFORMATION

Firstly, and in order not to mislead any interested reader, the author wishes to offer a justification of the chosen full title and, more specifically, of the use of the term **OPINIONS**, which could be misleading to some extent.

The basic motivation of this publication is an extended compilation in extenso, with updated modifications and/or significant additions, of the series of articles already published in the magazine *La Voz del Colegiado*, which has been the communication, professional and social organ, among the members of the College of Civil Engineers. Since its inception, the word of reference has been applied there, as a general epigraph, to any contributions of the collegials, in all its possible variants: technical and professional, of course, but also scientific, cultural and / or social, in its broadest sense, and even, fond memories dedicated to deceased collegials by those of us who had been their closest companions. This publication also includes others, I still use the name *Opinionones*, relating to developments subsequent to those sent to *La Voz*, some of which I have also referred to earlier in the *blog* of my own website, [www.prubper.com](http://www.prubper.com)

And here I would like to point out that my collaborations have already begun in the situation of retired people, and, as Platón\* said, thus forgetting any direct concern about strictly professional subjects, those mentioned above in the first place among the possible ones related to different contributions of the members, I focused my dedication, then as an entertainment of my hobbies rather than a rigorous occupation, on my related mathematical hobby, not only in *La Voz*, but also with the edition of *e-books* in both digital and printed editions, of which this one is the last exhibition, taking advantage of the opportunity offered by Bubok to authors of any nature, in my particular case, without the least lucrative spirit because the downloading of all of them I have put it free. Thus, I continued my *curriculum* of previous publications during my active professional practice in various national and international technological journals, as well as three other articles, these strictly mathematical in content, which were accepted at the time by the prestigious *Journal of Geometry*, the last two on a common original subject and the first on a different one, and which have been the germ of two subsequent *e-books* on these same disciplines. In most of those publications, among those corresponding to the technical field, mathematics was already an important instrument and support for the fundamental approach and themes, *sic*, for example, in the laying of railway tracks, which was the subject of my first publication in the *Journal of Public Works*, in structural calculation later on, or, as newer disciplines, in my last professional years, in operational research and artificial intelligence.

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\* “Old  
*age is a time of tranquillity and freedom. Once the violence of passions has been extinguished and forgotten of any disturbance, we are liberated from a multitude of tyrants.*”

In La Voz I also participated opportunely, with the heartfelt memory, which I include here again as Opinion 8: Obituary, for the loss of a friend and companion, a clear Burgos engineer, with whom and his close friends and acquaintances we soon, in his own city, from the early years of my professional practice and my married life, personal and family relationships intensively, maintained later in the distance and in time, at least communicative, since finally they have not been able to become more immediate, along our respective successive vicissitudes, lived separately in different cities of our geography by each family, following the course marked by each new labor or professional requirement: Burgos, Madrid and Bilbao as their last residence and now that of theirs, them; Zaragoza, Burgos, Santander and Madrid, ours.

The referred triple dedication, already exclusively, to the diffusion of mathematics, in my last creative stage, which includes the mentioned publications in La Voz, the edition of five previous *e-books* in Bubok and various comments and complementary developments on the aforementioned *website*, has been interrupted in recent years by the priority attention required by a very painful family situation and, with it, my own discouragement, and is now resumed, with this new *e-book*, this time carried out as a forced escape in my present suffering loneliness.

My warning is therefore addressed to the reader, in the sense that the content of the book does not exactly correspond to the most common meaning of the denomination Opinion, which is a manifestation towards other interlocutors, preferably oral, understood by all, whether shared or not, even seeking to contrast and/or debate before/between them.

Thus, the various expositions, centered, as I have said, on deductive mathematical processing, with the exception of obituary, refer to areas as differentiated as the theory of numbers, probability, multidimensional geometries or recreational mathematics. Its monitoring therefore requires a certain mathematical basis, as it has become obligatory for all of us throughout our own specific professional training and, in general, for all engineers and colleagues of any speciality. I discard here, as superfluous, to refer in the same sense to any other professional or student related to the different branches of the Exact Sciences.

The arrangement of Opinions 1 to 10 in the text maintains the publication of their homonyms in La Voz, grouped some of them as subtitles in the same unit, because they correspond to different related developments on a common mathematical definition. In particular, Opinion 10 groups together the eight published works related to a traditional mythical condition of the number 3 or to its most elementary geometric representation, equally telluric, the triangle. I am referring, also in particular, as some of the most significant concrete topics dealt with, to Su Doku, mathematical induction, angle trisection, multidimensional Pythagoras, problems of three-dimensional optimizations or numerical relations associated with the distribution, not yet formulated, of prime numbers in the series of natural numbers.

After the interruption of my contributions to La Voz, as a first cause, due to the personal vital circumstance already mentioned, and also due to the suppression of the magazine as an independent publication and its additional inclusion in the College's Information Bulletin, probably for financial reasons, the subsequent arrangement of additional Opinions 11 to 15 also corresponds to their respective origins in a later creation, referring to different themes,

sic, polarities in conic beams, a singular vote, rectifiable curves, Zenon's aporia or *hyperboloidic* quaterns (in a free version of the French analogical term) in the quadric ruled, with a common denominator, in relation to Opinions 11 to 14 and, also, to the previous Opinions 7, 10.4 and 10.6, which has been the communication, although intermittent, friendly and continuous, maintained by digital means with our colleague David Vergés, in relation to his own successive publications in *La Voz*, in the previous individualized edition and in its new integration in the *Bulletin*, as set out in each of the respective Introductions. Publications that I sincerely consider to be not only a companion, but also a true friend, even though we still have our direct mutual knowledge pending, in all of which, for the greater amenity of the reader, he exercises an ironic personal style of his own, which is not at all hurtful, and whose content is oriented, moreover, preferably, towards recreational mathematics, in subjects that are certainly abstruse for any uninitiated reader.

In any case, and consequently with the main objective of our previous magazine, *La Voz*, I tried in all the published Opinions to alleviate the rigour of mathematical logic, complementing it with different annotations and observations in various more generalized spheres, and, on different occasions, justified by their thematic relationship, with references to other fellow authors and/or more personal references to some other meritorious or own collegiates. Of course, all of them always intentionally more intellectually and culturally than socially, preserving at all times any personal identity in them, given that my own personal identity is, it has always been, although the personal revelations included in this presentation and motivated by the desolation not overcome in a situation of permanent sadness, to which I refer specifically at the end of this presentation and then in the epilogue, can be considered somewhat contradictory, much more intro than extraverted. On the other hand, in the updated reproduction of certain Opinions, some other individual professional references have been deleted, included in their original versions, as they lack any significance outside the collegial scope.

In the retrospective remembrance that also affects me at this point in my life, about what has been the same, I remember, in regard to the previous author-reference, praise the neologism, the comment that my good friend and fellow countryman Manolo P., companion of the last teenage years, made to me, in our beloved and, at that time, certainly quite Leviticus, city of Cuenca, with the two high schools in the Institute separate for men and women, and the walk at sunset on the main street, the unforgettable *Carretería!*, boys and girls equally separated, and allowing themselves the most daring greetings as they crossed, **eh!** and the immediate answer **ea!**.

Some year later and already displaced during the school months in Madrid to prepare for our future, during a vacation in Cuenca, Manolo, the most graceful young man of the gang, medical student and already with a girlfriend, in Madrid!, and later on a good traumatologist specialist, he told me, clearly with a second intention, "Pablo, Ad told me he likes weird guys." Although there was evident mutual sympathy, now in modern-day modernity we say empathy, Ad and I, in the presential provincial environment of the time, do not arrive, obviously, never to the eh! and much less to the ea!.

I also remember now, with a certain nostalgia, other dozens of situations, anecdotes and characters from my years of living in affordable boarding houses in Madrid, accessible to our parents because there were very different categories; the two in which I was, occupied mainly by students and by some opponents who suffered considerably more than the former, paradoxically because of the completion of their academic studies, but with the uncertainty of the new odyssey undertaken by them. Our analogues belonging to families with greater resources, and also some official protégés, were housed in Colleges Major, with comforts and services not comparable, although, seen in the distance, experiences, people and living environments, I think now that I would not have liked to change.

It is a certainty that in the realism of the 1950s, the life of a normal student in Madrid had, of course, little to do with the cheerfully friendly painting and happy endings for all the occupants of *La Casa de la Troya*, although not for the *Maragotas*, a novel by Pérez Lugín in the atmosphere of Compostela in 1915; a laughing reading of my first youth, on the benches of the park of San Julián, using the facilities provided by the public library located on the ground floor of the music kiosk. Reading, like others of mere entertainment, as well as among the most requested by the youth clientele, the oriental *The thousand and one nights*, compensated in the following years with other literatures, more substantial and adult, some of which, among the printed and accessible at the time, those that could have been more contributory to my own interest of cultural and intellectual development, I refer to in the section dedicated to Opinion number 4; these already, in the main municipal library, located in a commercial rented ground floor, close to the Institute, which required the reader's card, free of charge except for the two photographs that we had to deliver, ordered, always in a hurry, to the nearest professional Aguilar; card of which I made a fairly continuous use throughout the seven years of my baccalaureate.

In the first boarding house where I stayed, near Plaza del Carmen, there was also a mechanic from Iberia who lived on alternate days, between Madrid and Mallorca where his family stayed, and with even more intermittent regularity and without diminishing our company, with stays of one to two weeks, as soon as each premiere of a new Musical became popular, attracted above all by the situation of the pension, immediately to the cafés and theatres of the Gran Vía and surrounding areas, Don Joaquín appeared, a jocundo and kind widower, of very good position among his own in his land jienense, as a wealthy landowner who was, and according to the reference already made, one more among us subject to the differences of age that we all respected. Don Joaquín and the mechanic were paired in the domino game after lunch, against any other pair of scholarly guests. It was rarely possible to get the former to pay for the latter's coffee. Don Joaquín imposed his experience of the innumerable hours he had to dedicate to the same game in his *dolce far niente*, in the Casino of his town. Among the theatres dedicated to his particular interest, the most popular, La Latina, was outside our area. However, his favourite was the Alcazar, a stone's throw away, where they triumphed at that time, the sorceress palatine, the matchless Celia for him, or, with more attraction for us, and here we did count the age, the two sisters Daina, Irene and Raquel. This contemplation was made possible by the very low prices of the clá, an unforgettable institution in which, strategically located, we were commanded by an orchestra conductor, the same distributor of cheap tickets in a cafe close to the theatre and known only to those who knew, to the demonstration of an enthusiastic admiration throughout the performance, animator and

mobilizer of the common audience to applause, although, as young people, such a character and his direction would be obviously superfluous to us for this purpose. Throughout my stay in Madrid, already in the career, some of us were even more assiduous to the classics of different theatres- theatres in which we admired the art and dramatic resources of D. Rafael, D. Carlos or Aurora, put the reader surnames, all of them solitary, or delight with Conchita, Isabelita or Juanjo, with surnames also prestigious in the world of the show business, in their performances of Neville or Mihura's creations. The concrete nominations of the six excellent actors mentioned above, respond to the memory of their brilliant protagonisms in each other's dramatic plays, *La muralla*, *La muerte de un viajante*, *La gata sobre el tejado de zinc*, or comedies, *El baile*, *Sublime decisión*, *Tres sombreros de copa*, which have left me, all of them, an emotionate, pleasing and indelible memory.

In my second pension, more comfortable, with central heating, to which we moved with my brother's coming also to Madrid to study medicine, the intellectual level was higher and the sport of folded tokens was no longer practiced there. We'd go out to the cafe at King's Square, next to Price. The most common guests of the pension were distributed in pairs in double rooms. Two other single master rooms, with a much larger surface area, were occupied by two middle-aged lawyers, who were in active employment and had no immediate or indirect relatives closer than us. The most communicative and talkative, advisor in a company, with a formal non-resident friend in the boarding house who never visited during my stay, moderated the meetings of table-top substitution of the previous dominoes and, generous, paid for the coffee of the *contertulios*. The second lawyer, a civil servant in an official centre in our street, more reserved and distant, burned his leisure with the cards, and we suspected that with very good money also, as partner of the nearby *Círculo de Bellas Artes*, to which the poor *pringados* did not have access, settling with some invitations to attend the acts of the *Ateneo*, located in the geographical surroundings of our pension, in a more secluded environment than the Circle, and that we came in few isolated occasions.

In one of those double rooms my brother and I lived until the end of my stay in Madrid. Then he went on with different companions for a few more years, and with his career finished and started his professional life in an important Clinic, a milestone in Spanish health care, it is enough to name, as he and his colleagues called with deep respect, its founder D. Carlos, and preparing the opposition of professor of the Faculty of Medicine, which he approved in his first call, finally abandoning the pension, still a few years later, to marry another female doctor. The adjacent room was also occupied by two Andalusian brothers, the eldest, one admitted to *Caminos*, already in the last years and planning his wedding, which would be immediately upon his graduation, with the daughter of a professor; and the second, an opponent to a notary, of which I did not come to know if finally successful. The ambition of the same first essential academic success, the admission, achieved years before by my neighbor, the engineer already in potential, that is older than mine, but still not achieved by my part before our arrival to the pension, was satisfied in the first year of stay and I culminated it a few years later, with the completion of the career and my definitive exit from what had been my welcoming refuge until then, on the way to an independence and personal responsibility, which, although satisfying, meant *ay!*, at the same time, the definitive farewell to my youth.

Going back to those first years of alternative presence between Cuenca, in a mini-vacation barely enjoyed, and Madrid, where the stay was practically continuous, since the academy I attended did not interrupt his work in summer, and, as I say, obsessed, at the time, by the preparation, by means of personal effort and the assistance to the same one, of the entrance in the School of Civil Engineers, really at that time, a spade in Flanders!, in a hyperabsorbent dedication, forgive me the neologism once again!, and with the stimulating concern about a still very insecure future because it was truly a real opposition of very high competitiveness, whose failure left you with no other title but that of bachelor, which, although properly worked and valued until then, would not be enough in itself to earn a living, unlike the other opponents who already held his university degree, although of course I never allowed myself to be invaded by the popular "retruécano" - I see the future as dark!, which has been more recently widely publicized and justified, were left behind, without the slightest formal attempt by either side of a sentimental approach as required by the time, the essential male statement, Al, Au, Ad, which I want to assume and fervently desire, will have happily resolved their lives.

Without renouncing the past years, as I have been making clear here with all these memories, my definitive, affective and vital destiny was certainly not in my small country. It was resolved, however, happily also, as soon as I finished the career and left Madrid for my first professional assignment in Zaragoza, in a mischievous breakdown of the capital A, not in the name but in the first surname of the woman I had fallen in love with as soon as I saw her, Ar. She and her two married sisters were named by their friends, with the common admiring joint nickname, the Arévalo. We met at the end of my first year in the city, when I was already settled, and we got married after a short relationship of only two months of interested friendships and four months, more formal, of dating, a milestone at the time; The wedding, as it was obligatory in El Pilar, officiated by the Dean, followed only by a week of honeymoon and roses in the Palace, my first return to Madrid, did not have the pomp that I could not yet afford, nor did it correspond to my introversion, although we were farewelled at the station at all voice by José Oto Royo, the greatest spanish Jota Aragonesa singer and a good friend of my wife's family; and, also, it was celebrated with all the illusion of a happy mutual understanding, present and future, as it has been fulfilled.

The return was no longer practically to Zaragoza, but, almost immediately, to a new destination in Burgos, with the beginning of a new professional stage, to which I have already referred previously. There, our family environment was consolidated with the arrival of two daughters and one son, and later with that of one more daughter, already in Madrid. And now I suffer the incurable pain of the death of my dear wife after more than fifty-six years of a full life together, which has already been my own particular paradise, unfortunately for me today, in the well-known literary reference, the lost paradise.

Allow me, then, the relief.

## EPILOGUE

Linking with the final words in the Presentation, I am also enclosing the expression of my sentiment, read in due course by the eldest of my granddaughters, at my wife's funeral.

*The words my grandfather wants but is unable to say:*

“It would not correspond to me, for being decidedly partial and shocked, to make here and now a more complete panegyric of Mary José, who has been my beloved wife.

All of you who have treated her know of her personal and social category, relevant without the slightest boast, and always much higher than mine, for my greatest happiness throughout our fifty-six years of common life, plus the six months of dating, a record, this last one, really unusual in the time of our first mutual knowledge:

Exquisitely educated, in correspondence with her noble ancestry, for her condition as members of the Real Maestranza of Zaragoza since its creation in 1819, through successive generations, of which she never commented, on the other hand legitimate vanity, and now I can say proudly, sensitive, affectionate and excellent friend of all, as well as a perfect wife and mother. The human condition itself, in all its relations with others, has undoubtedly been, for its friendships, a quality that has been valued and, also, adequately appreciated, in its permanent eagerness to make others happy.

In my present inevitable desolation, which I hope will be surmountable, and although this may not be the place, but it is the time, I apologize to the officiating father and my children for expressing my desire to meet her again. For me, Christian resignation is today a palliative of the spirit.

And, in return for the sadness that surrounds us, I also feel proud and I know that she would feel even more protected by the protection that my granddaughters have given me with this reading, so as not to leave the itchiness of not knowing how to share with the relatives and friends present, something of the intimacy of my deepest feelings. They, with the other grandchildren, daughters and son, will personify, God by means of, when I also lack our future earthly continuity, again matched.

The family thanks you very sincerely to the priest and to all of you, the prayers here dedicated to her memory at this time.”