The personality of Lagrange

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Abstract A brief examination, based on correspondence, of some of the characteristic aspects of Lagrange's personality.

Keywords 18th-century mathematics · Biographies of scientists · Psychology of mathematicians

All of the biographies of Lagrange agree in underlining his extreme reserve and his detachment from everyday things. Many examples are found in the documents collected by Maria Teresa Borgato and Luigi Pepe [1] and in the two volumes of Lagrange's *Oeuvres* [3, vols. XIII and XIV] dedicated to correspondence. Let us see some of these examples.

Lagrange had his convictions, but did not flaunt them. In a letter of 1772 he wrote that “the field of science and literature is vast enough to achieve fame in them without offending religion and government, and consequently without exposing oneself to difficulties” [1, p. 85]. He did not relish being the centre of attention. When he moved from Berlin to Paris, Louis XVI sent him 4,000 lire to cover his travel expenses; to the friend who brought him the news, he said, “Here is a fine thing, but you must not speak about me any longer” [1, p. 90].

His letters from Berlin and Paris to his father and brothers are scarcely expansive. He sent only one or two a year. About himself he says almost nothing. He often

speaks of the weather, of winters that are either too cold or unusually mild. In 1772 he wrote to his brother Carlo, “Some time ago I received your last letter. Not having anything important to say, I put off answering from one day to the next” [1, p. 133]. His life in Berlin was spent quietly, and his silence must not be attributed, as he sees it, to indifference, but rather “to the kind of uniform life I lead, which is such that the days follow each other, and even the years pass, almost without my realising it” [1, p. 134]. Not asking for any news, he sometimes forgot details. In 1799 he wrote to his brother Michele, “Do you have many children? How old are they? I no longer remember when it was that you married” [1, p. 150]. However, he helps financially his father and brothers, and gives good advice regarding the studies of his nephew [1, p. 176].

He would like to return to Turin to see them, but he is happy where he is. When the Commissary of the French Republic in Piedmont goes to visit his family to guarantee them of the protection of the new government, Lagrange's father embraced him and began to cry, “He is my son, it has been 32 years since I have seen him” [1, p. 98]. This is in 1798, and his father was by then 90 years old. It is not that Lagrange made no plans to visit: “I had a certain desire to make the trip to Italy with the nephew of the Gagliari family, but the short duration of his leave and the harshness of the season in which he left made me change my mind” [1, p. 143]. Then, the daily routine prevails: “The kind of tranquil and uniform life to which I am accustomed here takes away any desire to travel, and no matter how great a pleasure it can be for me to see again and embrace you and my brothers and my sister and all my friends, I very much doubt I will succumb to the temptation to undertake the trip to Turin” [1, p. 131].

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Lagrange's reserve is not shyness. If necessary, he acts resolutely. In the memoirs of Dieudonné Thiébault, a French man of letters who lived in Berlin from 1765 to 1785, this anecdote is found:

I recall that the minister of Sch..., a man of the cloth but lively and accused of pride, had had the king adopt a project for a fund for widows, and Mr Lagrange having read to the Academy a memoir in which he demonstrated that this fund would have necessarily ended almost immediately in bankruptcy, the minister had it said to the academician that, instead of publishing that memoir he should have consigned it to the government; to which this last replied, first, that he had not made his memoir public and had contented himself with having done the duty of friendship, warning his colleagues of the risk they would run in interesting themselves in that project, and second, that not having been assumed to be at the command of ministers, he felt he had no obligation to wait on them, offering illumination that they had not asked for; that it was up to them to choose who they wanted to make the calculation they needed, and finally that he merited no reproof since they had made no recourse to him. This moderate response, so solid and just, reduced the gentleman from Sch... to silence [1, p. 83].

In effect, Lagrange knew that he could count on the support of Frederick II on academic questions and did not hesitate to use this advantage to defend his independence.

The restrained energies of a closed nature sometimes came out in biting sarcasm. In 1776 the distinguished mathematician Anton Maria Lorgna sent him a book on series, asking for his opinion. Here is what Lagrange said:

The method that you employ for the sum of the series is one of the most beautiful discoveries ever made in this field; it is even more extended than I think, since it can also be applied to the series in which each term in the product of the preceding term by one or two given factors. I have no doubt that you have found this method on your own, but it could not have remained unknown for long to the geometers. In effect, it was published by Mr Euler in vol. VI of the old *Commentarii* of St. Petersburg, in a memoir entitled "Methodus generalis summandi progressiones". I find further that it was not unknown to Leibniz, as can be seen from letters XXXVII and XXXVIII of the *Commercium philosophicum et mathematicum*, printed in Geneva in 1745. Moreover,

in letter XXXIX, Johann Bernoulli had already had the idea of reducing the sum of the series of reciprocals of the powers to the squaring of hyperbolas of different orders. ... Although you have been preceded by these great geometers, you have no less merit for having made this discovery after them; for my part, I render you all the justice that is due to you in this regard [3, vol. XIV, p. 255].

Perhaps Lagrange did not remember that he too had erroneously believed himself to have discovered something new in his first publication, the *Lettera di Luigi De La Grange Tournier Torinese all'illustrissimo Signor Conte Giulio Carlo da Fagnano* [2].

His two marriages, for as much as we know, were happy ones. Dieudonné Thiébault recounts that "Mr Lagrange married in Berlin a relative who was as loveable as intelligent ... The couple was very quiet and not very loud; the husband and wife equally loved the calm of enlightened society" [1, p. 83]. D'Alembert, who loved Lagrange like a younger brother, learned of his marriage from others: "They write me from Berlin that you have made what we philosophers call the *saut périlleux* [dangerous leap] and that you have married a relative who came from Italy; I compliment you, since I believe that a great mathematician must first of all know how to calculate his own happiness, and that after have made this calculation, you found matrimony as the solution" [3, vol. XIII, p. 100]. Lagrange's reply is chilling:

I do not know if I have calculated well or badly, or rather I believe I have made no calculation, since I perhaps would have done like Leibniz, who owing to reflection never made up his mind. However it may be, I admit that I was never tempted by matrimony, and that I would never have become involved if circumstances had not in some way obliged me to. Being in a foreign country, without friends or family, and having quite delicate health, I thought to ask a relative of mine, who I had known for a long time and with whom I had already lived for some years in my father's house, to come and share my fate and take care both of me and all that regarded me. Here is the exact story of my matrimony. If I did not mention it to you it is only because the thing seemed so little worthy of note that it wasn't worth the trouble of speaking of it [3, vol. XIII, p. 102].

There was nothing for d'Alembert to do but answer in the same tone and change the subject:

Since your matrimony, dear and illustrious friend, is a question of arrangement and convenience, I make my compliments to you, as the priests give absolution

quantum possum et quantum tu indiges, and I find that, all considered and by the final result, you have done very well” [3, vol. XIII, p. 104].

(Translated from the Italian by Kim Williams)

References

1. Borgato, M.T., Pepe, L.: Lagrange. Appunti per una biografia scientifica. La Rosa, Turin (1990)
2. Lagrange, J.-L.: Lettera di Luigi De La Grange Tournier Torinese all'illustrissimo Signor Conte Giulio Carlo da Fagnano, Turin, Stamperia Reale ; rpt. in [3], vol. VII, pp. 583–588 (1754)
3. Lagrange, J.-L.: Oeuvres de Lagrange (14 vols). In: Joseph Alfred Serret (ed.). Gauthier-Villars, Paris (1867)

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