

Fermat to Mersenne

(Excerpt)

Tuesday, April 20, 1638

MY REVEREND FATHER,

1. I am very grateful for the pains that you take to satisfy my curiosity; it has pleased you to share with me a letter that I find quite excellent, both for the subject matter that it contains, as well as for the words used to express it; it is the letter which is signed *Petit*,¹ which is a name unknown to me, but which has given me a great desire of becoming acquainted with him; I would be delighted if you could please give me the means of doing so. And I believed that neither you nor he would disapprove of the liberty that I took of erasing at the end some words which indicated that his objections against the *Dioptrics* of M. Descartes were stronger and less susceptible of being replied to than were mine. It is not that I doubt him, because I have developed a high opinion of his mind; but I wish, if you agree to it, to remain somewhat set apart, and to see all these beautiful disputes rather as a witness than as a party to them.

2. You would do a very great favor in addition to all the ones you have already done, if you could give me the means of seeing the Discourse that the author of this beautiful Letter has promised concerning *refraction*. And if I dared to hope for the communication of the experiments that he has performed, perhaps I would combine it with geometry, if I found them to be in agreement with my thoughts. I will eagerly await this satisfaction, and will return his writing to you (which I have kept to make a copy) by the first post.

3. I also wait for you to favor me with the responses that M. Descartes made to the difficulties that I had posed regarding his *Dioptrics*, and his

¹Mersenne had informed Descartes of this writing by Petit in a letter of Feb 12, 1638.

remarks on my Treatise *de maximis et minimis et de tangentibus*. If there is some small rancor, as it is difficult for there not to be, considering the difference between our thoughts, this must not prevent you from showing them to me; for I protest to you that it will make no effect upon my mind, which is so far from vanity, that M. Descartes could not esteem me so little that I not esteem myself still less. It is not that complacency might force me to disavow myself from a truth that I will have known, but in this way I let you know my state of mind. Please do me the favor of waiting no longer to send me his writings, which I promise you in advance not to copy.

4. I have seen much of M. Despagnet these past days, with whom I have long been a close friend;² if he goes to Paris, as he hopes, he will tell you that he agrees with me in all the small Discourses that I have made, including the one on the *Dioptrics*.

I wait to hear news from you, and am, etc.

Fermat.

Toulouse, April 20, 1638.

5. When you would like my little war with M. Descartes to end, I would not be upset, and if you would provide me the honor of his acquaintance, I would be more than a little thankful.

The remainder of the letter does not deal with refraction, and has not yet been translated.

²*avec qui je vis de longue main comme un ami intime*