

SOME REMARKS ON THE HISTORICAL DEVELOPMENT AND THE FUTURE PROSPECTS OF THE DIFFERENTIAL GEOMETRY OF PLANE CURVES.*

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PROBABLY the most fundamental characteristic of the human mind is its hatred for contradictions. All of our thinking is fundamentally influenced by this dislike; and the rôle of the mathematician, in his relation to reality, may be described in a fairly adequate manner by saying that it is his business to remove all contradictions from our discussions and, by gradually extending the scope of these discussions, to show that the world as a whole is thinkable.

To justify the validity, in the purely mathematical sense, of any construction of the intellect, absence of contradictions is necessary and sufficient. But the mere absence of contradictions from a realm of thought does not necessarily give it that essential artistic and harmonious one-ness which leads us to think of it as a unit. A peculiarity of the human mind, almost as important as its hatred for contradictions, is its dislike for sudden and frequent changes in the point of view. Thus, quite apart from the obvious practical difficulties of studying plants and stars and souls at the same time, the mind for the sake of its own peace and convenience, following its desire to move along a straight line, has divided knowledge into compartments, and refuses to think of more than one of these compartments at the same time. This procedure does not disturb in the least the profound conviction, present I believe in all thinkers, that at some future time from some other higher point of view the separateness of these compartments will be abolished. Indeed, we cannot help but think that a thoroughgoing unification of each separate realm is the best possible preparation for an ultimate and complete generalization which shall include the whole.

It is my purpose to-day to try and show you how one funda-

* Address of the retiring chairman of the Chicago Section of the American Mathematical Society, read at Columbus, Ohio, December 30, 1915.