

the purpose of seeing the country and he can map all that he, or rather his camera, can see. His work consists of two distinct parts; on the ground, he simply collects data, and, with the exception of a few angles, does not waste any of his time in plotting or making measurements. This is left for the office, where the only expenses are the salaries of the surveyor and assistant. In the next place, the party, consisting of an assistant and two men is, if not smaller, at least as small and inexpensive as for any other kind of survey. One man is sufficient to carry our camera and tripod almost anywhere, while an ordinary plane table, if it could be taken where our camera has been, could not be carried there by any single man.

It is objected that plotting from photographs is more laborious than plotting on the plane table. There is indeed a slight additional labour; against this may be set off the fact that no useless line is ever drawn, as when, on the plane table, a point is sighted upon which cannot be recognized from the next station. The greater convenience of working in an office, instead of in the open air, turns the scale in favour of the camera. But photography has an overwhelming advantage in the numerous processes which the laws of perspective place at the disposal of the topographer. The plane table cannot compete with the perspectometer or the perspectograph.

Another objection is, that points cannot be so easily identified on photographs, nor the forms of the surface so truly represented, as when the topographer has the ground under his eyes. This is a mistaken idea; there is no difficulty whatever in identifying any number of points on moderately good photographs, and, moreover, the topographer does not need, as with the plane table, to trust to his memory in order to recognize them. The undulations of the ground are, it is true, less distinct on the photographs, but this is more than compensated by the advantage of having, side by side, views of the same place from several stations.

The practice of photographic surveying requires a thorough knowledge of descriptive geometry and perspective. These sciences are not included in the programme of examination of Dominion Land Surveyors, and, as it is for them that this book is prepared, I deem it proper to explain the principles of both in a concise form, keeping in view the special purpose of their application to Perspective Surveying.