Another explanation of the occurrence of the pink spots in the dolerite might be given. They may represent the results of differentiation subsequent to intrusion by which the dolerite was finally freed from the granophyr and hence would be syngenetic. Many cases of such segregations are known in all parts of the world, and in general, in such cases, no granitic intrusion subsequent to the dolerite is known. In the description of the geology of the Antarctic[1] are noted numerous sills of gabbro intruded into sandstones. The interior of the sills contains patches of micropegmatite and quartz. The contact of the gabbro and the sandstone is fine grained and less acid than the interior of the sill. Here the acid patches are original, for no intrusion of granite subsequent to the gabbro is known. Holland[2] tells of augite diorites in southern India, which contain segregations of micropegmatite, and he considers that this acid material might have been separated from the augite diorite and injected as separate intrusions, similar to the phenomena and relations exhibited at Carrock Fell.[3]

Since from the above discussion, it is seen that the evidence supports the view that the simple and composite sills are magmatically related, the granite (micropegmatite) in the composite sills might be a separate intrusion of granite into simple sills. In this case, the sill would be compound. Under this supposition the second intrusion of granite (micropegmatite), since it occurs in some of the sills only and then always towards the upper margin, would be selective in character, which of itself is somewhat difficult of explanation. But there is also a complete lack of any evidence of cutting and no feeders (dykes) of acid material were observed, though basic dykes, the feeders of the basic sills, were observed. Furthermore, the contact of the gabbro and granite (micropegmatite) is in all cases gradational and the stratiform arrangement of the materials in the sill does not favour this idea.

Therefore, by the process of elimination, it may be concluded that the composite type differentiated in place and that it

[1] National Antarctic Expedition, 1901–1904, vol. 1.
[2] Holland, Q. J. G. S., vol. 51, 1895, p. 125.
[3] A. Harker, Q. J. G. S. vol. 50, 1894, p. 311.
Q. J. G. S. vol 51, 1895, p. 125.