three or four analytic hours every week for two or three years.

If Dr. Horney's conclusions are substantiated by the observations of other psychoanalysts, they may have an important effect on the practice of psychoanalysis. If self analysis could be used as a supplementary procedure, it would leave the analysts free to treat more patients. This would be particularly valuable in wartime when doctors are scarce and patients plentiful.

One illuminating case of self analysis is reported by Dr. Horney in full detail.

This was a young woman who, after a year of psychoanalysis, continued it by herself during the next two years. By a fairly systematic process of writing down her free associations and examining them later, she managed to free herself from her lifelong habits of submission and dependency, to become a reasonably happy and self-reliant adult, and to develop a previously inhibited capacity for original, creative writing. This seeming miracle was accomplished by an exceptional combination of courage, honesty and a determination to get well. In other words, "conditions were favorable."

Dr. Horney cites several cases in which "occasional self analysis" was helpful for specific problems. A business man of her acquaintance, for instance, was able to cure himself of superficial headaches. While he had never been analyzed, he was familiar with the psychoanalytic viewpoint and had an honest desire to discover the psychological reasons for his headaches. However, Dr. Horney emphasizes that in most cases attempts at self analysis are fruitless without previous psychoanalytic experience.

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VOLCANOLOGY

Bombing Lava Stream Deflects Flow in Harmless Direction

Hardened Crust of Lava Is Often From Six Inches To Two Feet Thick, But Easy to Break With TNT

BOMBING a lava stream to keep it from destroying a city is more or less like blasting a levee to relieve the pressure of a river in flood, except that a lava river builds its own confining embankments.

Lava of the type that Mauna Loa sent to threaten the city of Hilo early this month rapidly forms a crust on its outer surface as it flows, explained Dr. E. S. Shepherd, Carnegie Institution of Washington volcanologist. It not only builds up side walls but even roofs itself over.

This produces some impossible-appearing results, including the ability of the advancing stream to climb slight rises and to ignore side slopes that would deflect a stream of any normal, unconfined liquid.

These confining walls of hardened lava crust are often thick — from six inches to two feet—but the rock is brittle and readily breached by heavy explosive charges. All that is necessary is to drop a few moderately heavy bombs—say 500-pounders—against the side wall at a point where the break will permit the lava to drain down a slope into an unoccupied valley.

It is even possible, Dr. Shepherd said, to deflect such a lava flow with a firehose, by directing the stream on one part of the front to cause the more rapid formation of the confining crust there, permitting the lava to move in the desired direction at another point. The trouble is, however, that there is neither water nor firehose in most of the area ordinarily traversed by Mauna Loa's lava flows.

Bombing volcanoes to provoke eruptions in enemy territory, Dr. Shepherd added, is not a very promising tactic. The biggest air bombs would probably have no effect at all if dropped directly into either Japanese or Hawaiian volcanoes, or indeed into any of the volcanoes in the whole Pacific region.

Only one type of volcano might conceivably have its outburst triggered by an outside explosion. That is one in which the lava column rises close to the very rim of the crater, and then hangs there for several days before beginning active eruption. If bombed at just that time, the outbreak might be speeded. Obviously, such an apportunity comes too seldom, and is never timed just the way an attacker might want it.

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BOTANY

NATURE RAMBLINGS by Frank Thone

Everybody's Flower

ROSES crown the whole round world in June. Roses grow and are high favorites in the cool lands of the North, like Britain and Scandinavia; they thrive even more luxuriantly, and are loved no less, in the warmer lands edging down toward the tropics, like Persia and Spain. Only in Japan are they thrust aside by another flower, the chrysanthemum; and even there the cherry blossom, a near relative of the rose, runs close with second honors.

There seems to be something strongly appealing to a basic human sense of symmetry and rhythm in the crown of five petals that is the basic rose design. This pentamerous pattern repeats itself in all sorts of art designs, from beautifully modeled Chinese bronzes to the great rose windows above the doors of some of Europe's medieval cathedrals. And when Dante wanted a blazing symbol of the striving of innumerable souls toward the throne of God, he conjured up his unforgettable image of the Mystical Rose.

Roses have grown in gardens ever since gardens were first planted. And where gardens are oldest, in the Asiatic lands where civilization had its dim beginnings, roses are most highly cultivated and farthest developed. Most of the rose stocks of our gardens and greenhouses, with their rich array of colors and delicate nuances of shades and tints, their extraordinary development of double petals, are derived from these southern Asiatic species.

This effort toward wide variation in coloring and artificial perfection in form, centered on roses from warm-temperature lands, has given rose lovers their severest problem: lack of hardiness in the finest horticultural varieties. Over wide