and their proofs from the Zermelo-Fraenkel theory to the simple theory of types. Bernstein's equivalence theorem with its proof remains unchanged. Cantor's theorem that UM is always of higher cardinality than M must be expressed thus: Let EM be the set of all unit sets $\{m\}$ contained in M. Then $\overline{\overline{EM}} < \overline{\overline{UM}}$. The previous definition of well-ordering (see § 4) must be slightly changed to this wording: A set M is well-ordered, if there is a function R from EM to UM such that, for $0 \subset N \subseteq M$, there is a unique $n \epsilon N$ such that $N \subseteq R(\{n\})$. The wording of Theorem 10 must now be: Let a function ϕ be given such that $\phi(A)$, for every A such that $0 \subset A \subseteq M$, denotes a unit subset of A. Then there is a subset $\mathfrak{M}$ of UM such that to every $N \subseteq M$ there is one and only one element N_0 of $\mathfrak{M}$ such that $N \subseteq N_0$ and $\phi(N_0) \subseteq N$. Such slight changes will be necessary in many of the previous theorems and proofs. If we look at Theorem 6 for example, there can be no meaning in an equivalence between $M + N$ and $M \cdot N$ or even $M \times N$, because the elements of $M \cdot N$ are of type $t + 1$ and those of $M \times N$ are of type $t + 2$ when those of M and N are of type t. If, however, we replace M by its sets of unit subsets EM and N by EN, then $EM + EN$ and $M \cdot N$ will be of same type, and an equivalence between these two sets will be meaningful. Similarly we can compare $EEM + EEN$ and $M \times M$. I don't think it is necessary to carry out in detail these small changes in the considerations. By the way, it may be remarked that functions may well be introduced such that arguments and values are not of same type, but if functions should be conceived as special cases of relations, and relations as sets of sequences conceived as sets, such a procedure must be avoided.

13. The theory of Quine

There have been many attempts to avoid the introduction of types, which are inconvenient. One of these is the theory of Quine. An exposition of this can be found in the book "Logic for Mathematicians" recently published by B. Rosser. Quine's theory is something intermediate between the axiomatic theory of Zermelo-Fraenkel and Russell's type theory. It has in common with the former the feature that there are no type distinctions. On the other hand it has in common with the latter the feature that only stratified propositional functions are admitted for the definition of new sets. Indeed we have in Quine's theory the following axiom of comprehension:

$$(Ey)(x)(x \epsilon y \longleftrightarrow \phi(x))$$

with the whole domain of objects as range of variation of x and y. Of course y must not occur in $\phi(x)$.

It is easy to see that here we again get only one null set A and only one universal set V. We may for example use these definitions:

$$x \epsilon A \longleftrightarrow (y)(x \epsilon y \;\&\; x \bar{\epsilon} y), \qquad x \epsilon V \longleftrightarrow (Ey)(x \epsilon y \cdot v \cdot x \bar{\epsilon} y) .$$

Obviously the set **V** is ϵV. Nevertheless Russell's antinomy cannot be deduced, because the propositional function $x \epsilon x$ is not stratified, so that no