Some misprints should also be mentioned: The formula in the theorem on page 108 should be $\mathfrak{A}(X_1, \ldots, X_n, t)$; in formula (4) and at other places on page 109 the commas in conjunctions are to be deleted; in the lemma on page 116 there should be $\tilde{X} = T(\tilde{U})$; page 119, line 5, Φ should be substituted for Ψ; at several places on page 119, $\mathfrak{A}(X.Y)$ should read $\mathfrak{A}(X, Y)$; theorem 10 on page 128 has a somewhat curious numbering; page 130, line 5, in the formula replace X by $\bar{X}$; page 130, lines 13 and 14, the symbols И and И′ are to be interchanged. JIŘÍ BEČVÁŘ

B. A. TRAHTÉNBROT. *Konéčnyé avtomaty i logika odnoméstnyh prédikatov* (Finite automata and the logic of singulary predicates). ***Doklady Akadémii Nauk SSSR,*** vol. 140 (1961), pp. 326–329.

A preliminary report, containing the formulation (without proofs) of the majority of the results reported in the foregoing review. JIŘÍ BEČVÁŘ

B. A. TRAHTÉNBROT. *Nékotoryé postroénià v logiké odnoméstnyh. prédikatov* (Certain constructions in the logic of one-place predicates). Ibid., vol. 138 (1961), pp. 320–321.

Let I be the monadic second-order theory of the successor function. Using results of his earlier paper (XXVIII 254) the author proves that multiplication is not definable in I. A stronger result has since been established by Büchi (XXVIII 100(2)) who showed that I is decidable.

Trahténbrot's and Büchi's discussions of the monadic second-order theories and their connections with automata are very similar although both authors worked independently (Trahténbrot's work was not mentioned by Büchi).

At the end of his paper the author introduces the notions of a-decidable and a-enumerable sets of words.

One obtains the definitions of these notions by replacing the word "algorithm" by the words "finite automaton" in the definitions of decidable and recursively enumerable sets. ANDRZEJ MOSTOWSKI

B. A. TRAHTÉNBROT. *Asimptotičéskaà océnka složnosti logičéskih sétéj s pamàt'ù.* Ibid., vol. 127 (1959), pp. 281–284.

B. A. TRAKHTENBROT. *Asymptotic evaluation of the complexity of logic nets with memory.* English translation of the above. ***Automation express,*** vol. 2 (1959), pp. 13–14.

Let $L(n)$ be the smallest number with the following property: every Boolean function of n arguments may be realized by a logical net without memory element and with a coefficient of complexity less than $L(n)$. O. B. Lupanov has shown that

$$L(n) \sim \varrho \frac{2^n}{n}$$

In this paper Trachtenbrot considers an analogous problem for the class of all logical nets with memory elements and possible feedback loops. He shows that a similar regularity holds in this case. This regularity however is based on the idea of an optimal coding of the alphabet of states for the realized operator (the concept of operator was defined by Trachtenbrot in XXVII 252).

Some operators admitting simple realization are then considered and the possibility of simplification of the synthesis by way of an optimal choice of code is shown.

These results interesting in themselves are used further to construct a method of synthesis and to make an asymptotic estimate of the complexity of the nets considered. ANDRZEJ BLIKLE

T. K. BÉRÉNDS and A. A. TAL'. *Pnévmatičéskié réléjnyé shémy* (*Pneumatic switching circuits*). ***Avtomatika i téléméhanika,*** vol. 20 (1959), pp. 1483–1495.