

## List of Known Errata

A current list of known errata is maintained on the WWW at <http://math.idbsu.edu/~holmes/errata.txt> The author's e-mail is [holmes@math.idbsu.edu](mailto:holmes@math.idbsu.edu). Please tell me about anything you find!

The worst error is:

- p. 128 The object  $G$  used in the definition of sums and products of indexed families of cardinals is not described correctly. Currently, the text introduces  $G$ , incorrectly, as an element of the Cartesian product of the indexed family  $F$  of cardinals. It is necessary to stipulate further that the "index set" (the domain) of the indexed family  $F$  of cardinals is a set of singletons;  $G$  is then correctly specified as an element of  $\text{SI}^{-1}[\prod[F]]$ ; i.e.,  $\text{SI}\{G\}$ , not  $G$  itself, belongs to the Cartesian product of  $F$ .

It would be even better to start with  $G$ : "Let  $G$  be an indexed family of sets. Let  $F$  be the associated indexed family of cardinals, defined by  $F(\{i\}) = |G(i)| \dots$ " We could then define  $\prod[F]$  and  $\sum[F]$  in the same forms given in the text. In the proof of König's theorem on p. 132, the  $\mathcal{A}$  and  $\mathcal{B}$  functions are examples of the correct construction of  $G$ .

- p. 132 It should be  $\mathcal{P}_1^2\{B\}$  in the proof of König's Theorem, not  $\mathcal{P}^2\{B\}$ .

Other errors:

- p. 71, repeated p. 74: There is an extra parenthesis in the definition of Cartesian products of indexed families of sets, which might be initially confusing.
- p. 116: An obvious printer glitch; it should be possible to decipher.
- p. 125: In the last proof, the occurrence of  $|A - Y| + |A|$  should be  $|A - Y| + |Y|$ .
- p. 173: The statement and proof of a theorem is missing here. I assume without proving or even noting the assumption that for any rank  $X$  at or before  $Z_0$ ,  $T[X]$  is also a rank. This is true, and not hard to prove, but it does need a proof (supplied on my web page).
- p. 183: Both of the occurrences of  $T^2\{\Omega\}$  in the proof of the (correct) Theorem that No is an iterated cut system need to be replaced with something else; in the first case we need to say that the ranks are those indexed by elements of  $T^2[\text{Ord}]$  (the image of the set of ordinals under the  $T^2$  operation), and the second instance of  $T^2\{\Omega\}$  should be replaced by the limit of  $T^2[\text{Ord}]$ , which is  $\Omega$  itself, not  $T^2\{\Omega\}$ . The fact that  $\lim T^2[\text{Ord}] = \Omega$  is discussed in the next chapter.
- p. 190: In the definition of beth numbers, I neglected to stipulate that each of the collections intersected to form the set of beth-numbers must contain  $\aleph_0$ .