

# Correction to

  

## Upper semi-continuous set-valued functions

by

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### § 1. Introduction

We have found a mistake in the proof of Lemma 3 of [4]. In the penultimate paragraph of the proof, we seem to assume tacitly that the closed sets  $Q_H(\xi_j^*)$  are contained in  $\Sigma(H)$ ; but this is not necessarily so, and we can only conclude that the sets of constancy of the restriction of  $F(x) \cap H$  to  $\Xi(H)$  are relative  $\mathcal{F}_\sigma$ -sets in  $\Xi(H)$ .

In this note we give an additional argument that enables us to give a correct proof of this lemma. Since only the conclusion of the lemma is used in the rest of [4], no use of the incorrect details of the proof being made, even tacitly, all the theorems and lemmas of [4] hold good.

In a second paper [5] we have made extensive use of the details of the proofs of [4] to obtain selection results for upper semi-continuous set-valued functions taking their values in Banach spaces with their weak topology. The proofs of these results can also be corrected; this will be done elsewhere.

We take this occasion to mention an improved version of the selection theorem of [4]; proofs will be given elsewhere.

A function from a space  $X$  to a space  $Y$  is said to be of the *first Baire class* if it can be obtained as the point-wise limit of a sequence of continuous functions from  $X$  to  $Y$ . The higher Baire classes are defined by the condition that a function of the  $\alpha$ -th Baire class, with  $\alpha$  any countable ordinal, can be obtained as a point-wise limit of a sequence of functions from  $X$  to  $Y$  of the previous Baire classes. A space  $Y$  is said to have the