

IDENTIFICATIONS IN SINGULAR HOMOLOGY THEORY

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INTRODUCTION

0.1. Given a Mayer complex M , a subcomplex M' is termed an *unessential identifier* for M if the natural projections from M onto the factor complex M/M' induce isomorphisms-onto on the homology level (see [1, § 1.2]). The present paper is a continuation and improvement of certain results obtained by Radó and Reichelderfer (see [1] and [3]) concerning unessential identifiers for the singular complex R of Radó (see [1, § 0.1]). We shall make use of the results, terminology, and notation in [1] and [3] with one exception. Because of a conflict in notation in [1] and [3], we shall use the notation η_p for the homomorphisms

$$\eta_p : C_p^S \longrightarrow C_p^R,$$

defined as the trivial homomorphism for $p < 0$, and for $p \geq 0$ as follows:

$$\eta_p(d_0, \dots, d_p, T)^S = (d_0, \dots, d_p, T)^R$$

(see [1, § 0.3]).

0.2. The principal results of the present paper may be described as follows. Let $N(\sigma_p \beta_p^R)$ denote the nucleus of the product homomorphism

$$\sigma_p \beta_p^R : C_p^R \longrightarrow C_p^S.$$

THEOREM. *The system $\{N(\sigma_p \beta_p^R)\}$ is an unessential identifier for R .*

Furthermore, for each p we have

$$N(\sigma_p \beta_p^R) \supset \hat{\Delta}_p^R \supset \hat{\Gamma}_p^R,$$

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