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by

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ERRATUM TO: ON DOUBLE SPIRALS IN FIBONACCI-LIKE UNIMODAL INVERSE LIMIT SPACES

H. BRUIN

Let $\varprojlim([c_2, c_1], T)$ be the core inverse limit space of a unimodal map T restricted to the core $[c_2, c_1]$. The purpose of the paper [3] was to create distinct rays C, C' inside $\varprojlim([c_2, c_1], T)$ that converge to the same limit point, thus forming what was called a *double spiral.* However, the proof of Theorem 1 in [3] is false, because the backward itineraries associated to C and C' cannot be simultaneously admissible. This follows from Lemma 1 below, to which I am indebted to Ana Anušić. In fact, Theorem 1 cannot be repaired, because it follows from a slight extension of [1, Proposition 1] that every subcontinuum of a unimodal inverse limit space contains a dense copy of $\mathbb{R}$ **having a single symbolic tail**. Double spirals fail this property, regardless of the inverse limit space. The claim that the converse of Brucks & Diamond's result (namely that points with the same symbolic tail belong the same arc-component, [2, Lemma 2.8]) is false still stands. Indeed, some unimodal inverse limit spaces contain copies of $\mathbb{R}$ converging on either side to a point, see e.g. the bar F in the arc + ray continuum of Example 3 in [1]. The resulting arc has three symbolic tails.

Lemma 1. *Let $a_1 < a_2 < a_3 < a_4 < a_5$ be positive integers. Then for any tent map, $\varprojlim([c_2, c_1], T)$ does not contain simultaneously arcs A and A' with folding patterns a_1, a_3, a_5 and $a_1, a_2, a_1, a_3, a_4, a_3, a_5$.*

Proof. Let A' be an arc with folding pattern $a_1, a_2, a_1, a_3, a_4, a_3, a_5$. Then the projections $\pi_{-a_5}, \ldots, \pi_{-a_1}$ of A' and maps $T^{a_5-a_4}, \ldots, T^{a_2-a_1}$ are as

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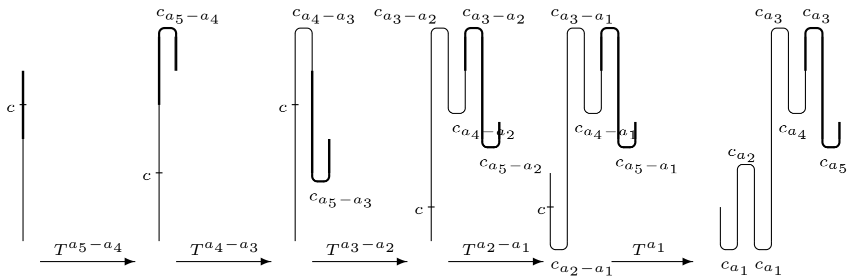
in the below figure, so $c_{a_1} < c_{a_2}, c_{a_4}, c_{a_5} < c_{a_3}$ or in the reverse order. In bold, the arc is drawn that should correspond to A with folding pattern a_1, a_3, a_5. However, because $c_{a_4} > c_{a_1}$, it is impossible to extend A and reach a fold with level a_1 before visiting a fold with level a_4. □



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