

# *Erratum*

## **Spectral Properties of One-Dimensional Schrödinger Operators with Potentials Generated by Substitutions**

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Several people, and in particular Bert Hof, have pointed out to us that the definition of the potential on the negative integers given in our paper, as well as in some previous ones [1, 2] is actually inappropriate for several reasons and should be altered. The correct definition, which was for instance used in [3] in the case of the Fibonacci sequence, is to define the doubly infinite sequence  $w$  as a limit point (in the product topology) of the periodic sequences  $w^{(n)}$  that are obtained by repeating the words  $\xi^n(0)$  indefinitely to the left and to the right, i.e.

$$w^{(n)} = \dots \xi^n(0)\xi^n(0)\xi^n(0)\xi^n(0) \dots$$

It is easy to see that  $w \in \mathcal{A}^{\mathbb{Z}}$  is then a fixpoint of some iterate of  $\xi$ , i.e. it is a fixpoint of some primitive substitution. The potential  $V_n$  is defined by  $V_n = v(w_n)$ .

In all the proofs in our paper, as well as in [1, 2] this definition was implicitly used so that their results apply to such potentials rather than to those obtained by symmetric extensions. The crucial point where the former definition goes wrong is Lemma 3.1. Also, the unique ergodicity of the dynamical system  $(\Omega, T)$  holds if  $\Omega$  is the closure of the set of translates of  $w$ , but can fail if the old definition is adopted. The reference to the symmetry of the potential made in the proof of Lemma 3.4 is unnecessary. In fact, on p. 60, the phrase “Assume that  $\Psi_E(1) \neq 0$  (otherwise . . .)” should be removed. Note that the vector  $\Psi_E(1)$  cannot be zero unless  $\psi$  is identically zero.

Note also that there is a misprint on p. 60. The last expression in the statement of Lemma 3.4 should be read  $|x_E^{(n_i)}(\gamma_0)|$  instead of  $|x_E^{(n_i)}(\beta)|$ .

Finally, we would like to point out that the assumptions of Theorem 3 can be relaxed so that it applies to a larger class of substitution sequences, that comprises in particular the period-doubling sequence. This generalization has been suggested by L. Raymond [4] and goes as follows.

Note that  $\mathcal{A}^*$  has the structure of a free semi-group. We can easily extend this to a the free group  $\mathcal{A}^*$  by adding the formal inverses of the letters in  $\mathcal{A}$  as generators.  $\xi$  has a natural extension as a group automorphism on  $\mathcal{A}^*$ . Moreover, the map