

Suggested Corrections for David Buckley's thesis

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- p.9 Definition 1.4.1: change 'instead extended' to 'be extended'.
- p.10 Definition 1.4.2: change 'word non-empty' to 'non-empty word'.
- p.18 Foot of page: in the FSA for (4), you need $X = \{1\}$.
- p.24 Theorem 2.1.1: 'The algorithm will run in time $O(m\mu)$,...'. Modify the statement to make clear what m is (ie A, B are lists of length m).
- p.25 Second line of §2.3 should read '... elements are X -words,...'.
- p.25 On page 25, section 2.2, there are four constants which, it is stated, are used in chapter 2. Actually they are used more often without warning (I found it in Proposition 4.6.1, page 135). Please warn the reader about this.
- p.32 Line -1. Conjugates to words are meaningless. Please repair this.
- p.41 Lemma 2.3.21: 'Firgure' \rightarrow 'Figure'.
- p.63 Second last line: one of the two ' $d(\hat{e}, \hat{c})$'s should be ' $d(\hat{e}, \hat{b})$ '.
- p.69 Corollary 2.4.6: It cannot be correct to say that $|C|$ is independent of A . I think you mean that there is a universal upper bound for $|C|$ that is independent of A .
- p.75 Line 5. The word 'exactly' is inappropriate because confusing words with their images in a group is not exact.
- p.75 Line -10. The time taken by 'ShortenList' seems to be $O(n^3\mu)$ not $O(n^2\mu)$.
- p.85 Line -3: 'vertex on $[a, d]$ ' should read $[b, d]$.
- p.86 Line -5: d_2 should read d_1 .
- p.89 Line -3: '*there is an upper bound [...] on the numbers n such that there exists $h \in H$ with $h = g^n$.*' Firstly, why not simply write $g^n \in H$? Secondly, this is not what you mean.
- p.100 Line 3: '*label geodesics*' is meaningless.
- p.110 Definition 4.2.8: the wording in the second paragraph has got muddled in a couple of places:
- 'are ball';
 - 'to which ... isomorphic to'.

- p.152 The notation Γ' is used for two distinct Cayley graphs: the original graph with respect to the generators X' , and the amended Cayley graph with respect to Y . Introduce another notation to avoid confusion. (I suggest $G = \langle X_0, R \rangle$ with Cayley graph Γ_0 for the first one.)
- p.152 Lemma 5.3.1: Add a few lines to the proof to take account of the fact that $f(w)$ has many subwords that are not of the form that is implicitly considered in your proof (ie $f(u)$ for some subword u of w).
- p.153 Proposition 5.3.2: Delete 'a'.