

# 1. Is Lovelace Able? by Ucaoimhu

In fact, she *is* able to use Babbage's newly invented Analytical Engine to predict the future of certain North American regions starting right now in 1837. This puzzle reflects this, as follows:

**INPUT:** 16 clues are "punch cards"; you must punch out (delete) a double letter in each before solving. Double letters are of two different types; the six identical ones are of type (i), and the other ten of type (ii). For each clue, where the word with the punchout is the *m*th word from its start and the *n*th from its end, note the *number m*, and also extract the *n*th letter from the clue's end. (A hyphenated term counts as one word.) In clue order, the letters extracted from (i) clues will spell a word, and the letters extracted from (ii) clues will spell two words each of which can precede the (i) word to form a phrase; the punchouts from (ii), in clue order, will say what each phrase is.

**PROCESSING:** The other 24 clues are normal, but their answers must be altered before entry, eight each in three ways reflecting three historical events yet to come (one altered entry is a prefix).

**(1) Revolution.** For each letter that is directly *before* the letter \_\_\_\_\_, change it to lowercase, rotate it 180°, and change it back to uppercase. (Some letters will be unchanged by this process.)

**(2) Suppression.** If any sequence of one or more consecutive instances of the letter \_\_\_\_\_ is surrounded by two letters, delete the sequence *and* the surrounding letters.

**(3) Reorganization.** Note the earliest letter in the answer that is either \_\_\_\_\_ or any portion of it; move the sequence of letters after that letter to the front of the answer.

The letters that go in the blanks above (all of which are different) must be deduced. For each answer that undergoes change *p*, circle the *p*th letter (a) from the start and (b) from the end of its clue. In clue order, the (a) letters will spell out something unusual an Analytical Engine can do to make sure everyone can see its results; the (b) letters will spell out a wordplay-only cryptic clue for the letters in the blanks, and also an amazing event that will occur over a century from now which will make the capability from (a) less important.

**RESULT:** Finally, for each of the two phrases from **INPUT**:

( $\alpha$ ) Punch its double letter out.

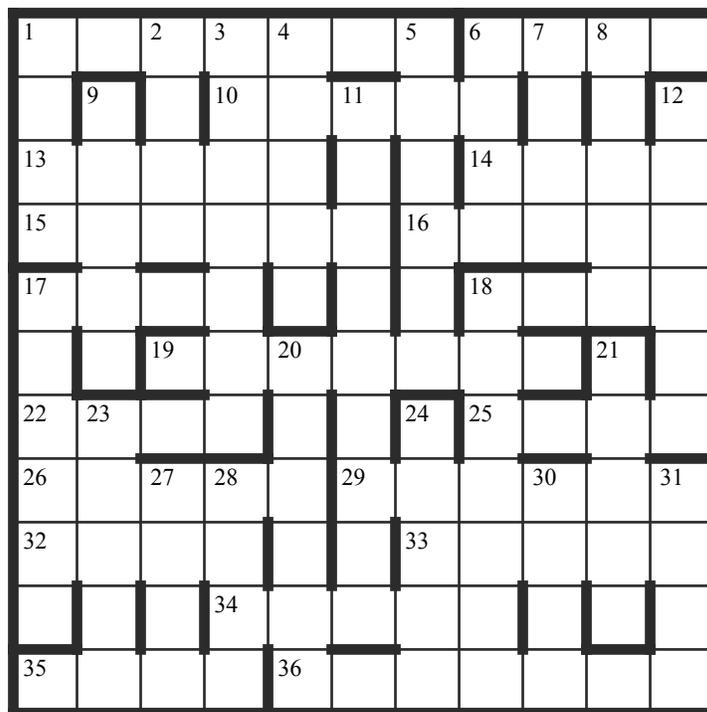
( $\beta$ ) Divide the six *m* numbers from (i) clues, in clue order, into three pairs, and for each resulting pair (*x*, *y*) move the *x*th letter of ( $\alpha$ )'s result *y* places forward in the alphabet.

( $\gamma$ ) For each of the ten *m* numbers from (ii) clues, in clue order, write down the *m*th letter of ( $\beta$ )'s result.

( $\delta$ ) Apply the three **PROCESSING** modifications in order to ( $\gamma$ )'s result to get the final outcome of the history from **PROCESSING**.

## ACROSS

1. My warty, initially weak-gutted bird of genus *Accipiter*
6. Enlivens spam written by one who ignores ruffles utterly
10. Thespian Moorehead is in Magnesia
13. Mysterious rail-biter is likely to become unhappy
14. Spokane's state troopers firstly will capture Earth quadruped that likes H<sub>2</sub>O (2 wds.)
15. Quaintly embrace oolong-bereft girl Lendl flummoxed
16. Athlete who used his ferret near east Martinique peak with ash
17. See clothing about Nat's top and bottom (2 wds.)
18. Small pressure unit two set down beside ranges
19. Shelter Tommy with tree inside of uncovered crate
22. Satisfies less energetic team from the NL East
25. One working soon
26. Letter measurers snap at aces



29. Greek characters heading back start to see (before Moreen) soldiers
32. Lousier, nastier derivative of tallow
33. Leaders of the early, early US put sweat on a tiny peg (2 wds.)
34. Dundee boy and cowgirl mold flip-flops with a bagel-like shape
35. Petite rocks found in a mine opening
36. Diplomat Macchiavelli and 1,200 in the western parts of Norway look over there

## DOWN

1. Quirky, rare houses Oscar and Roscoe usurp
2. Taxonomic gp. larger than a subspecies of grand burrs whirling around (*abbr.*) [NI3]
3. At last WGBH shows caps hiding excellent barrette-like things (2 wds.)
4. Things that ripen drinks from Connors when uncapped
5. Any of an Australian breed derived from British dogs that control sheep with seaweed and wire, lacking heart
6. Awes stranger with pair of words that "know wit" succeeds (2 wds.)
7. Felicity causes bruise
8. Offer discouragement to Tesla-straddling ruminant
9. Reportedly, "pig" . . . um, is a prefix for "kraut" and "braten" and such words
11. Peered at never-frolicsome nudes around Peru [NI2]
12. Word following *Pater* in poster page is new
17. Clean, more masculine creature that has watched Aaron's very first spins
18. Coin depicting St. Michael, director Lee, and helots you uncover [NI3]
20. Mint titanium centavo and tantalum cent (2 wds.)
21. Many a creature with two-toed forelimbs that a guide to sloths might depict was U Nu, peculiarly
23. Lauder the cosmetics magnate secondarily gets stemmed? Not entirely
24. Near four tureens with liquid of great importance
27. To start with, Dan's quiet, like the voices of bassi
28. Give some familiarity with routine, oddly (2 wds.)
30. Nurse no more pale swallows back in Europe
31. At gabfests, measures features of a body builder