# How to Create a Commissioned Crossword Puzzle
## by George Barany and Friends
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## Our Website (three ways to access it)
- Google "george barany crosswords"
- http://tinyurl.com/gbpuzzle
- http://www.chem.umn.edu/groups/baranygp/puzzles  (full URL)

## Our Team
- GB will work with you directly, and occasionally involve one or two others.
- All told, our virtual community consists of about fifty individuals on-campus (University of Minnesota) and off-campus, some of whom GB has known since JHS, HS, grad school; others of whom GB knows only via the internet – representing a wide range of backgrounds and expertise in real life and with crosswords.

## Please Introduce Your Team
- Your mandate to us:
    – To construct a puzzle that can be used in conjunction with your event or special occasion, and is customized for your "niche" audience ["lay" version can be created concurrently]
- Timeline:
    – Theme entries developed ASAP [but this often requires the most creativity; we've done it in less than an hour or it can take as long as several months!]
    – Draft grid (1 to 2 weeks)
    – Beta testing and iterative improvements (1 to 2 weeks)
    – Creation of webpage (several hours to 1 week, depending on how intricate)
    – Rollout

## Types of Puzzles (clearly overlapping categories)
- **Tributes**
- **Science** [mainly chemistry and biology, but includes math, medicine, anthropology, etc.]
- **Politics and Current Events**
- **Sports** [mainly baseball, but also basketball, football, tennis, Olympics, and even recreational games like bridge and, dare we say, crossword puzzles]
- **Music** [classical, Broadway musicals, rock & roll, etc.]
- **Quips and/or Quotations**
- **Wordplay** [add a letter, subtract a letter, vowel progressions, hidden words, rebus, visual, puns, etc., etc. – those are the kind that have the best chance to be published, but that depends heavily on the originality of the theme and the whim of the editor] [also, discuss "reveal," which can be a short word at the end of the puzzle, or the last long entry]
- **Themeless** [although there is a segment of the community that considers these the pinnacle of the field, we find them less appealing, in part because of the subjective nature of how they are received by editors and solvers]

### *New York Times* **"Gradient"**
- **Monday** – the easiest; this is how one "hooks" new solvers; maximum 78 words and 38 black squares (except in very unusual cases); simple themes with usually four or five theme entries
- **Tuesday** – somewhat harder words and definitions
- **Wednesday** – the gradient continues; clues are harder and trickier
- **Thursday** – longer and fewer words, the average is now 75 words, but the main difference is that these puzzles invariably have some sort of "gimmick"
- **Friday** – themeless, with longer word lengths (on average), and more "open" grids. Average 70 words and 31 black squares. Cluing tough, tricky, but ultimately "fair"
- **Saturday** – also themeless, this is where you might see obscure words and phrases, and even obscurer definitions
- **Sunday** – more people do these puzzles than other days of the week; they are all themed, and it's a challenge to come up with enough examples (typically 6 to 8) of a consistent theme; size is bigger than usual, typically 21x21, maximum 140 words, cluing at a Thursday level. Every so often, the Sunday falls on or near to a major holiday or anniversary (e.g., Mother's Day, centennial of Titanic disaster, etc., etc.) and that plays into the theme (then again, maybe not)

## Other Issues
- "Pangrams" can be controversial, some people love them, some people think they are cheap stunts that add little joy to the solving experience and wind up using inferior words (although inferior can be in the mind of the beholder). That said, there are any number of constructors who like to spice up their grids with "Scrabbly" letters like J, Q, X, and Z.
- The "Breakfast" Test
- Humor and wordplay, in good taste and *fair*
- What is a "Natick"?
- Crossword symmetry (very occasionally L/R)
- Minimum word length 3, no unchecked letters
- Minimum (ideally zero) duplication of letter strings
- Title of puzzle should suggest theme without giving it away
- Words used in clues cannot appear in the answer grid

## Our Overall Process
- Decide on theme(s).
- Research whether or not theme has been done before [a number of times, members of our team thought we had something novel, but there was either an earlier precedent, or we were flat-out "scooped" while our work was still in development].
- Get sense of difficulty level [for some specialized puzzles, we actually create two sets of clues, one for the experts, the other for general "lay" solvers].
- How much humor do we want in the puzzle grid [as opposed to in the clues, which is much easier to control, as long as it is not overdone]?
- Generate list of potential theme entries, the longer the list the better (within reason), set preliminary priorities. This is in some ways the hardest part.

- Technical point: GB provides a template Excel spreadsheet into which possible theme entries are entered, and then ranked by length (number of letters).
- Generate one or more grids, usually 15x15 but other sizes are possible on a case-by-case basis.  Theme entries are inserted, with the longest words and phrases going in first.  This is in some ways the hardest part (no, that's not a typo).
- In addition to the choice and arrangement of theme entries, the "fill" is important.  While some is unavoidable, an ideal puzzle minimizes "crosswordese," acronyms, abbreviations, "partials," and foreign words.  Draft grids are created with help of a computer program and a nested series of word lists [the more words in the list, the more likely that the puzzle will contain "dreck"].
- Optimization of the grid, an iterative (and sometimes tedious) process that erases and refills sections to remove suboptimal words and phrases.  Another important part of this stage of the process is to eliminate "similar" words.
- Cluing, with a premium on original clues, but then again, how many different ways are there to clue OREO?  We are helped in this by access to semi-public (there is often a nominal annual fee) and personal (Barany and Friends "approved") databases of clues.  Research and fact-checking are required for any "out-of-the-ordinary" clues.
- We explain opportunistic fill  along with opportunistic cluing. We discuss cross-reference type clues and related tricks [GB likes these, but it can be overdone and that can really alienate the solver].  We often make (relatively small) adjustments to the fill in the process of cluing the puzzle.
- Beta testing!
- Final edits and revisions, in response to issues that come up during beta testing.  For "commissioned" puzzles, we involve the "commissioner(s)" as intensively as she, he, or they wish.
- [Submit for publication – once the editor accepts, we lose "control"].
- Publication on our website (control is ours): (a) puzzle as pdf; (b) solution as pdf; (c) on-line solving; (d) picture; (e) explanatory text; (f) optional: more reading ("midrash"); (g) optional: multiple versions.  Also, (h) create tinyurl.  We put the puzzle "on-deck" – which is accessible only to our team.  Once "approved," we move from "on-deck" to "main" index, and any appropriate sub-indices.
- "Promotion" – GB's "bcc" list, and other more targeted [other e-mail list-serves, Twitter, etc.].

## Video Clips
- **How to make a crossword for the New York Times (9 min 45 sec, by Alex Boisvert)**
  http://www.youtube.com/watch?feature=player_embedded&v=VTwt8utt324#
- **Will's Tips for Beginners (1 min 22 sec, by Will Shortz) (constructed):**
  http://nyti.ms/PGTwmy
- **How a Crossword is Made (2 min 26 sec, by Will Shortz) (edited):**
  http://nyti.ms/VVsaqV
- **Will's Tips for Pros (45 sec, by Will Shortz) (sophisticated tips):**
  http://nyti.ms/RMMuLy