Building a Better WordPress through Software Archaeology

Boone Gorges
WordCamp NYC 2016
July 16, 2016

Boone



- WordPress core committer
- BuddyPress lead developer
- Developer and consultant,
 Hard G
- Timelessly stylish

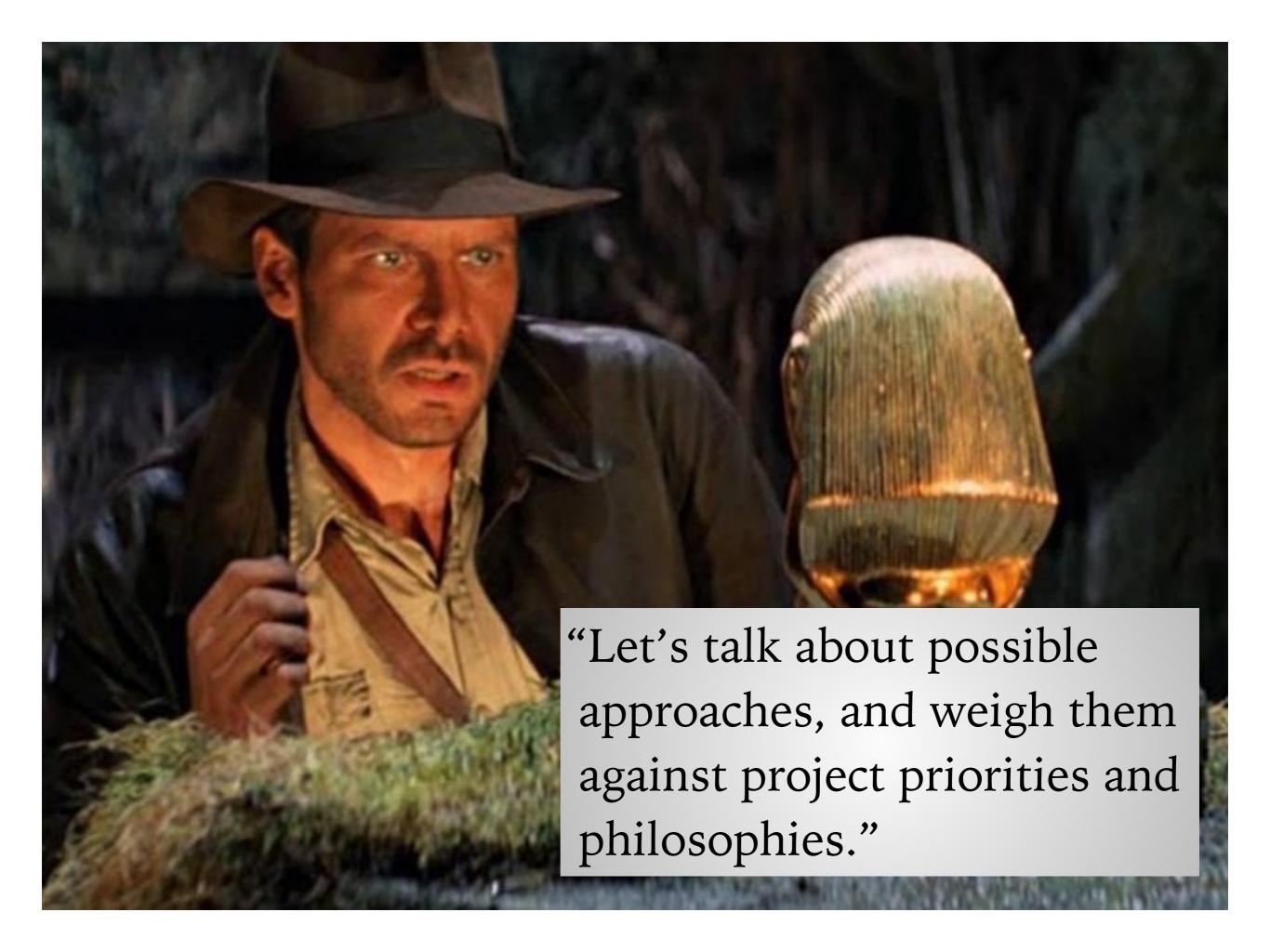
The bug hunter



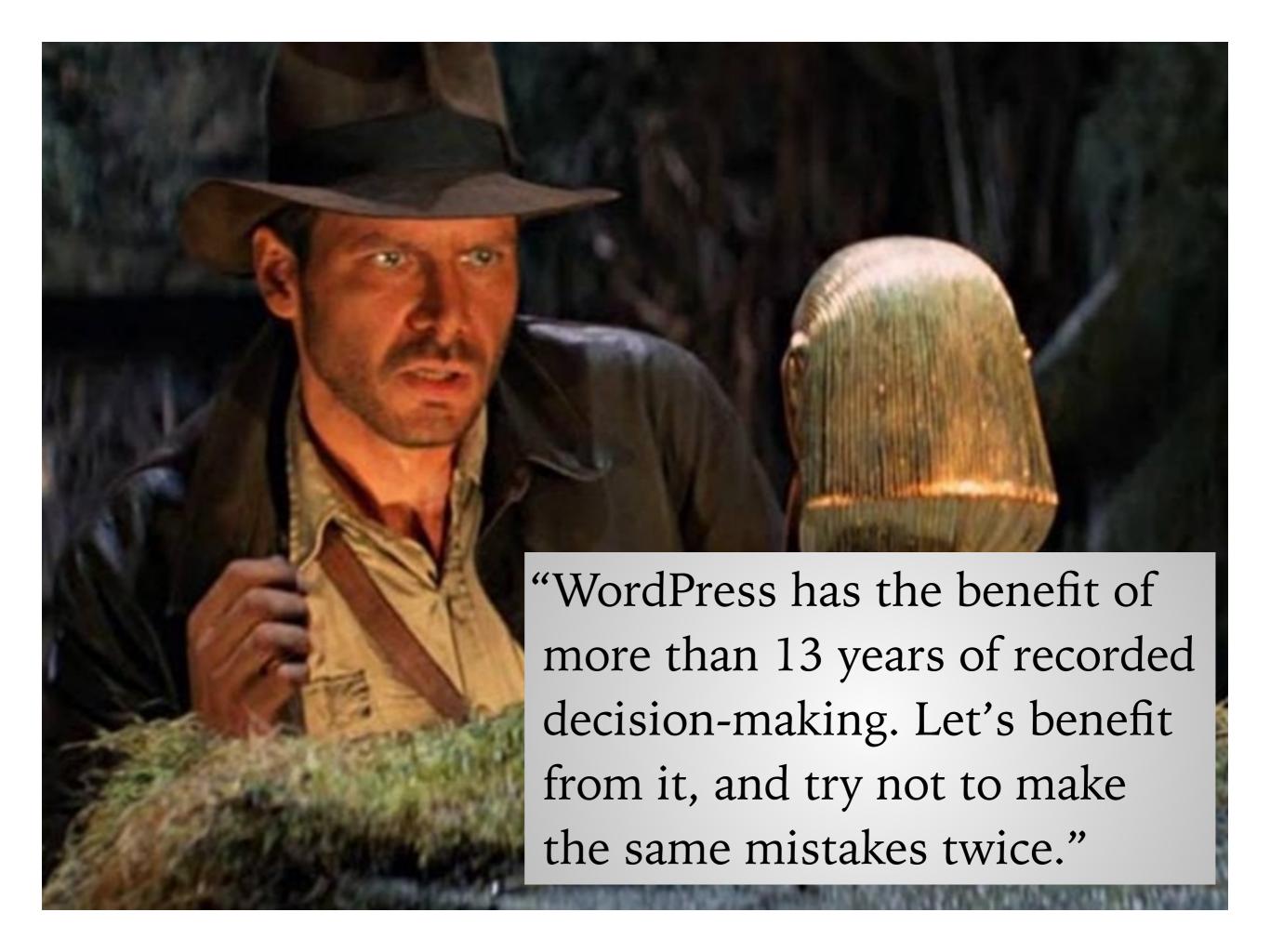


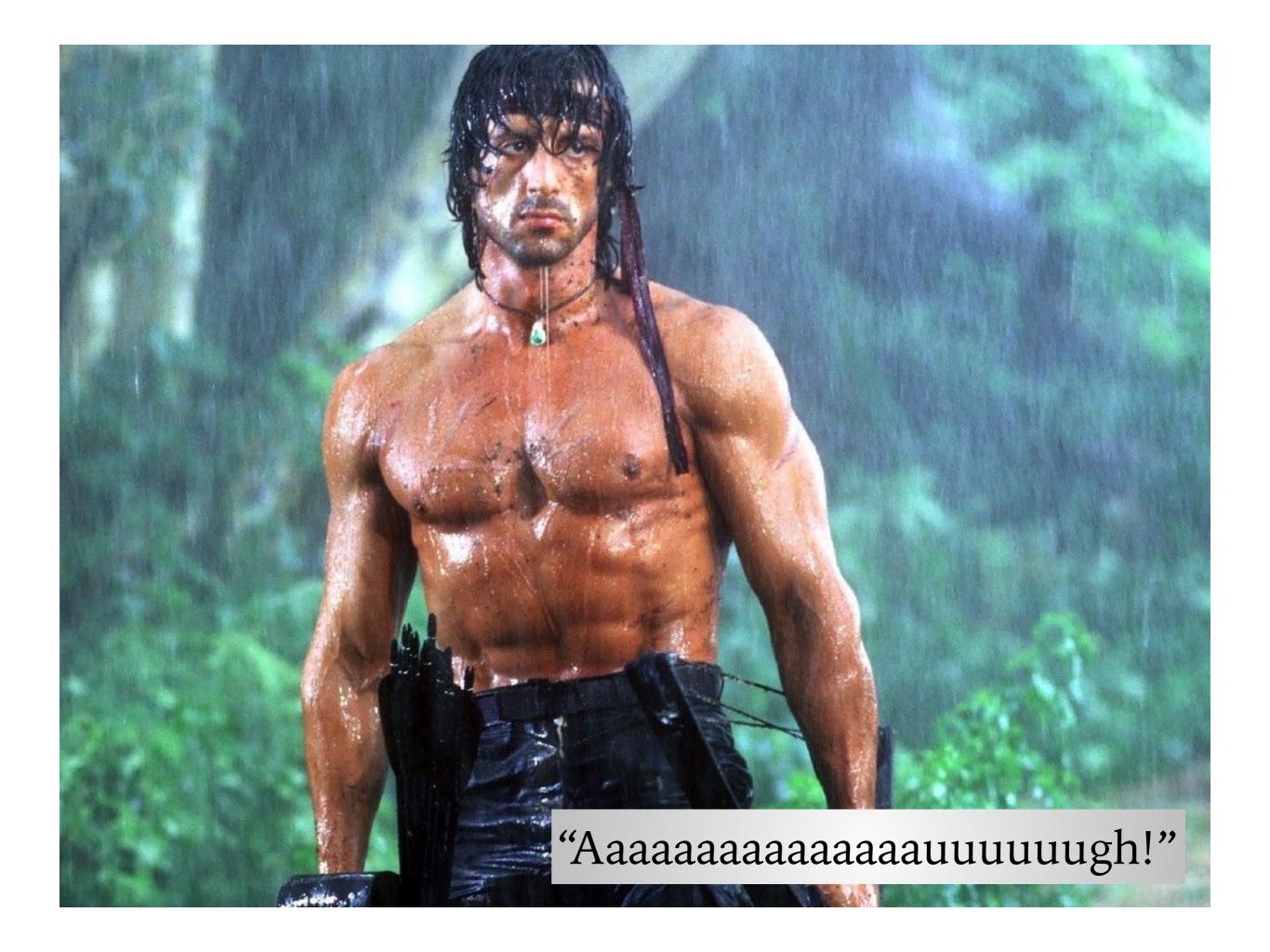


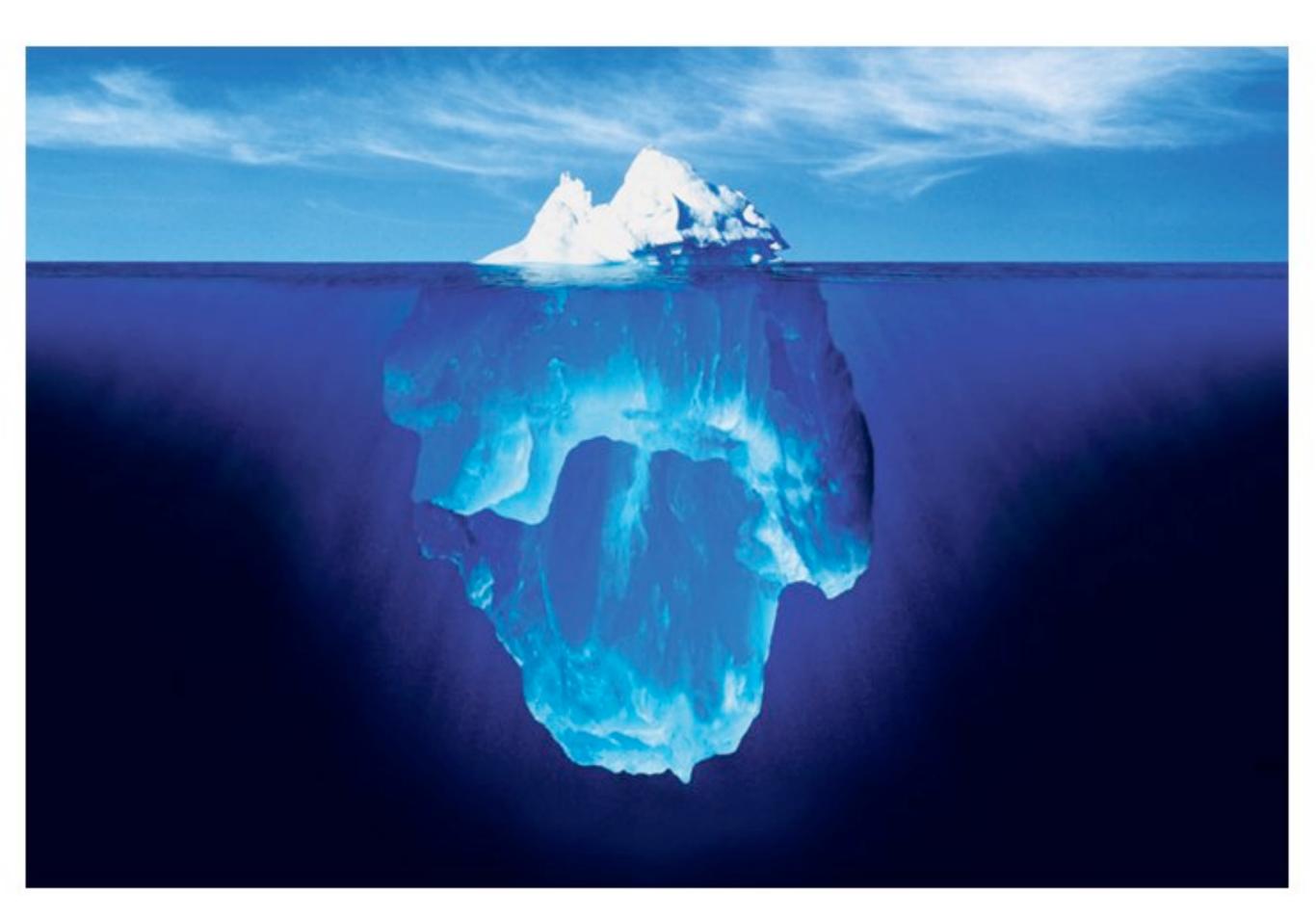






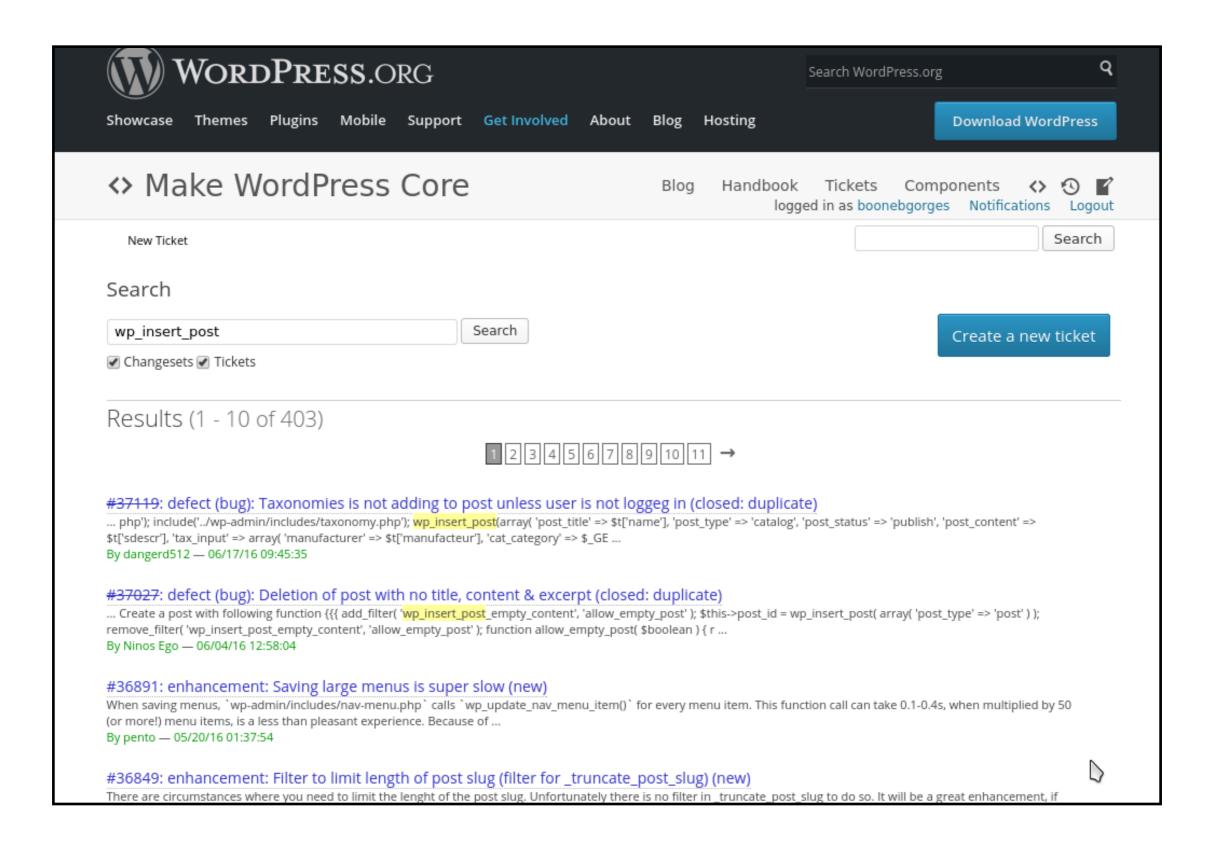




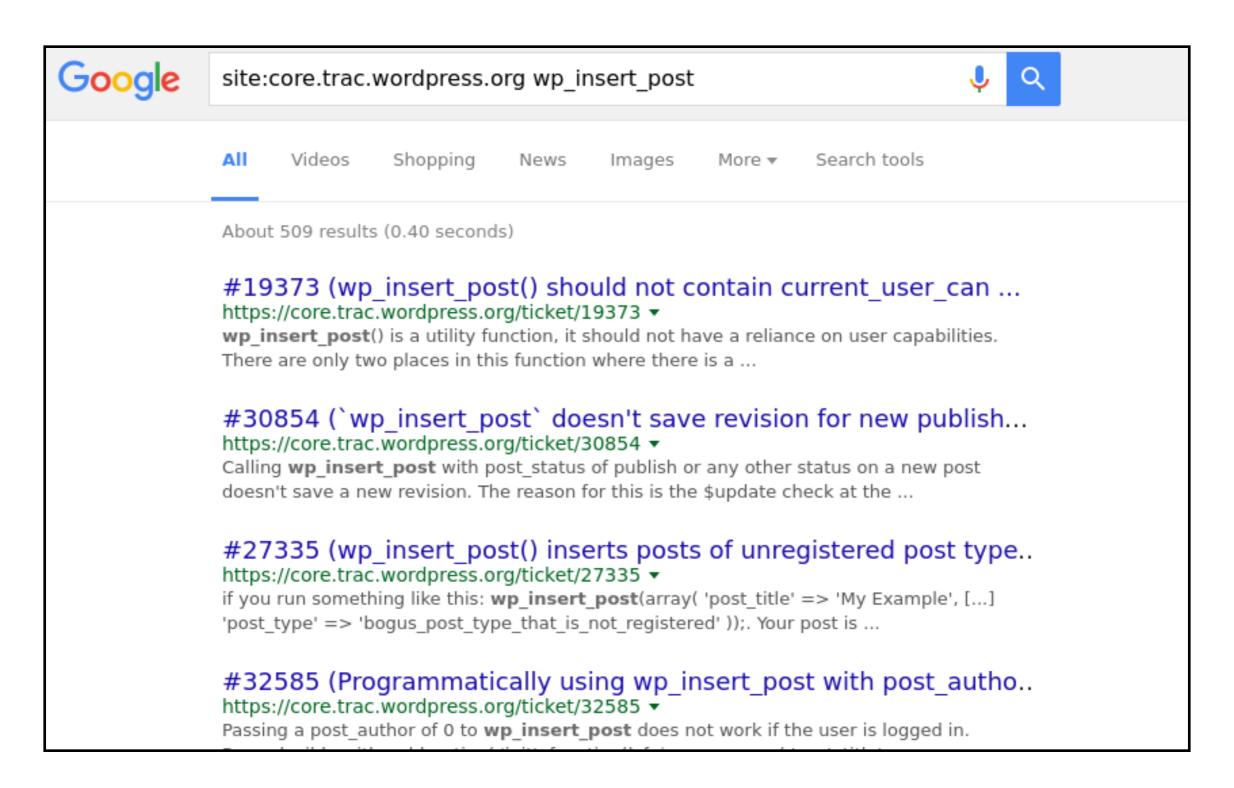


Know your tools

Understanding the discussion history

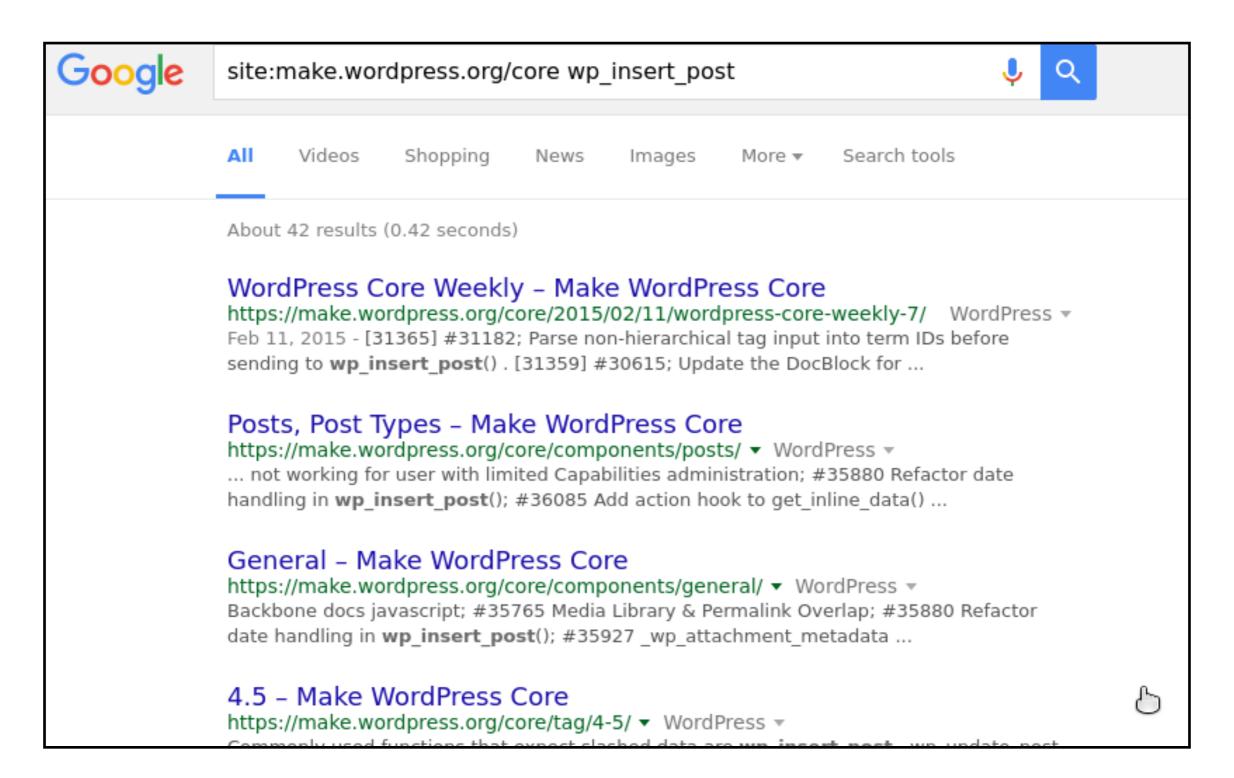


core.trac.wordpress.org



Google site search:

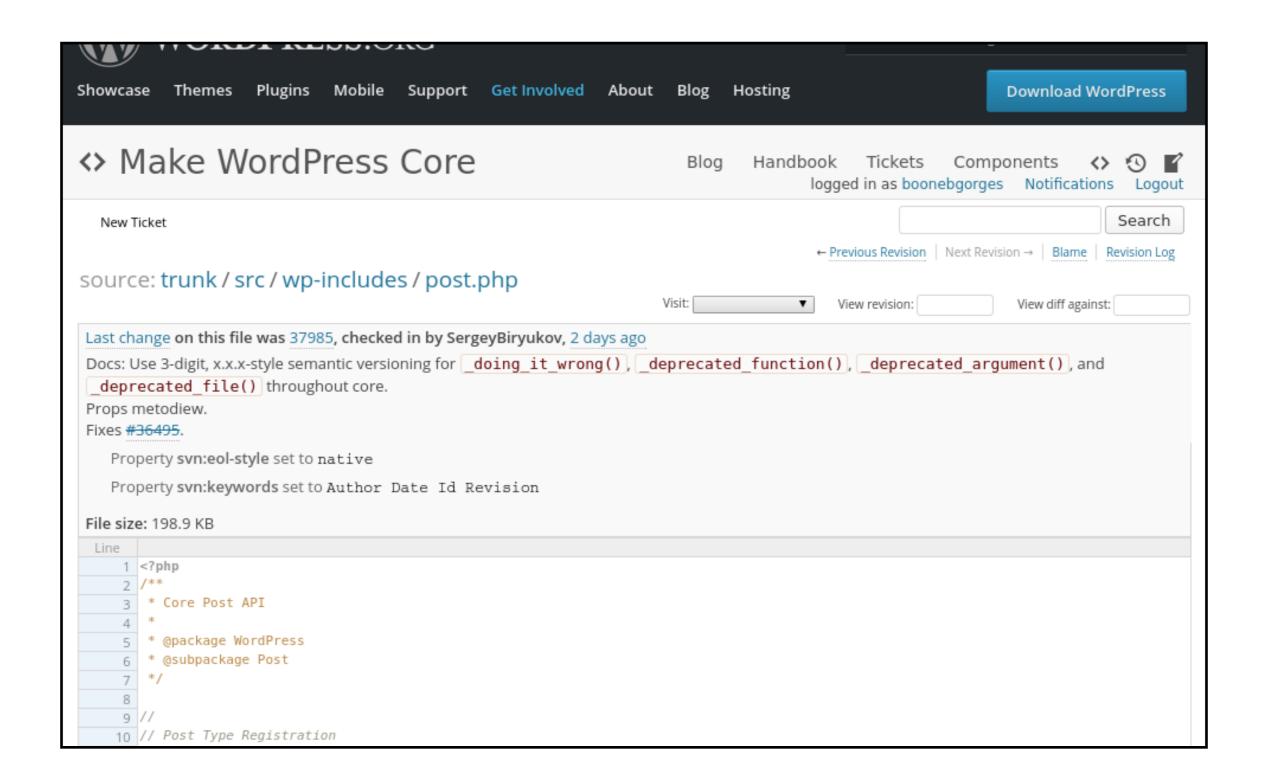
site:core.trac.wordpress.org ...

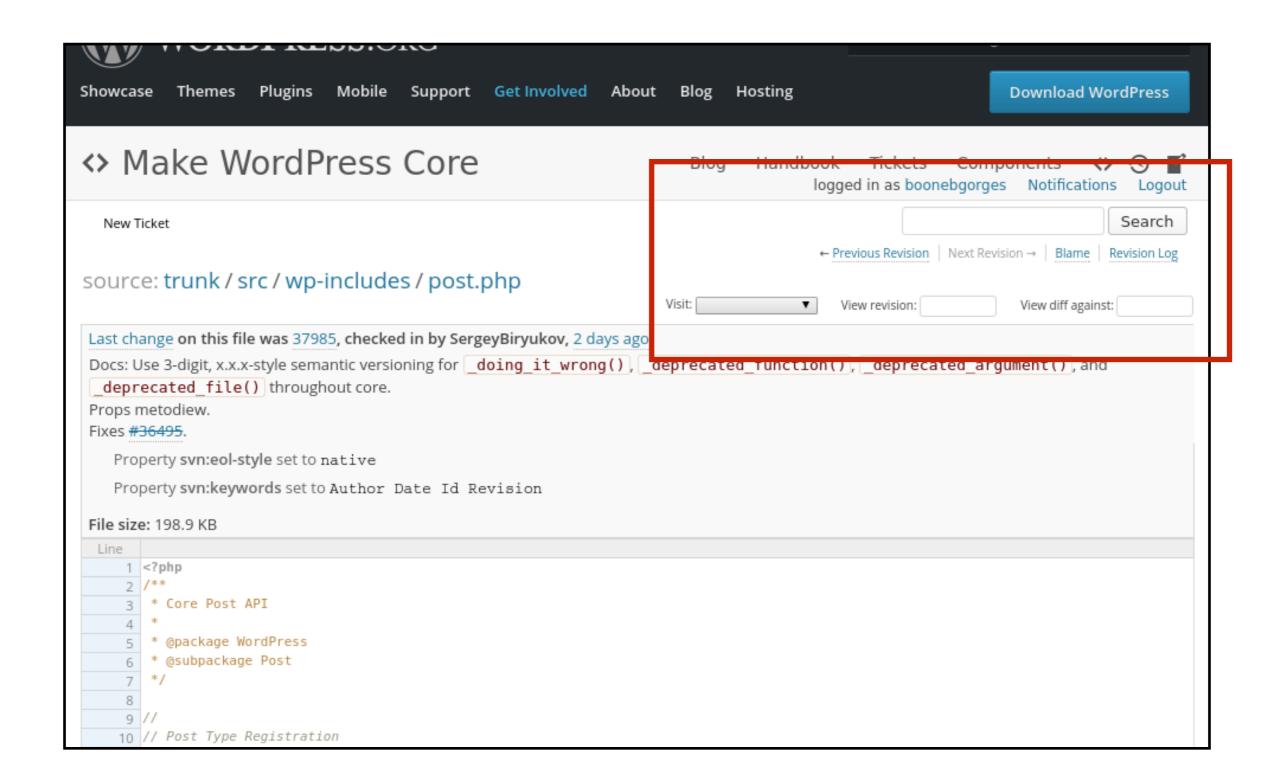


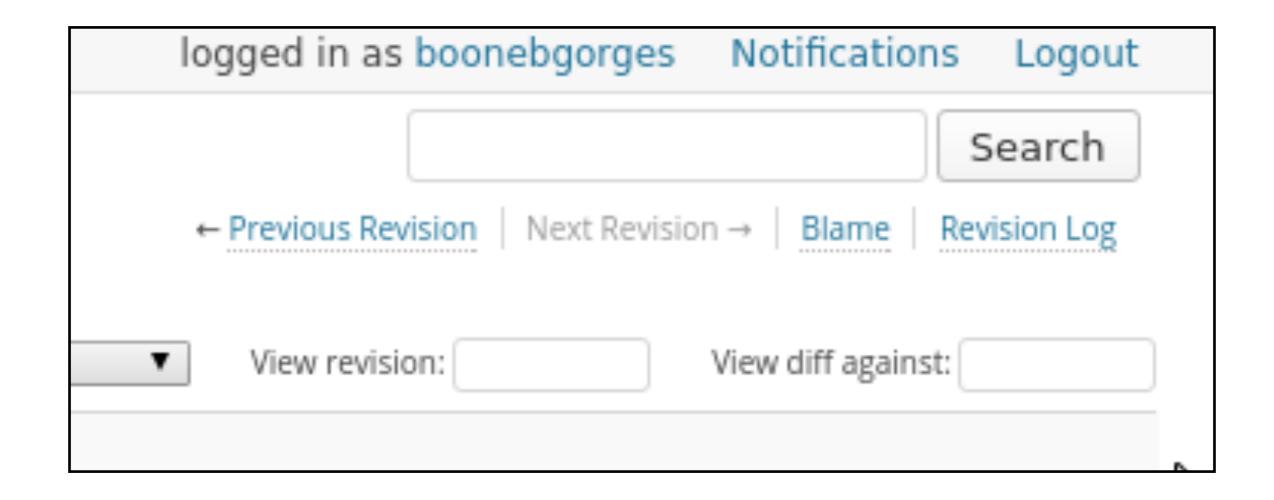
Google site search:

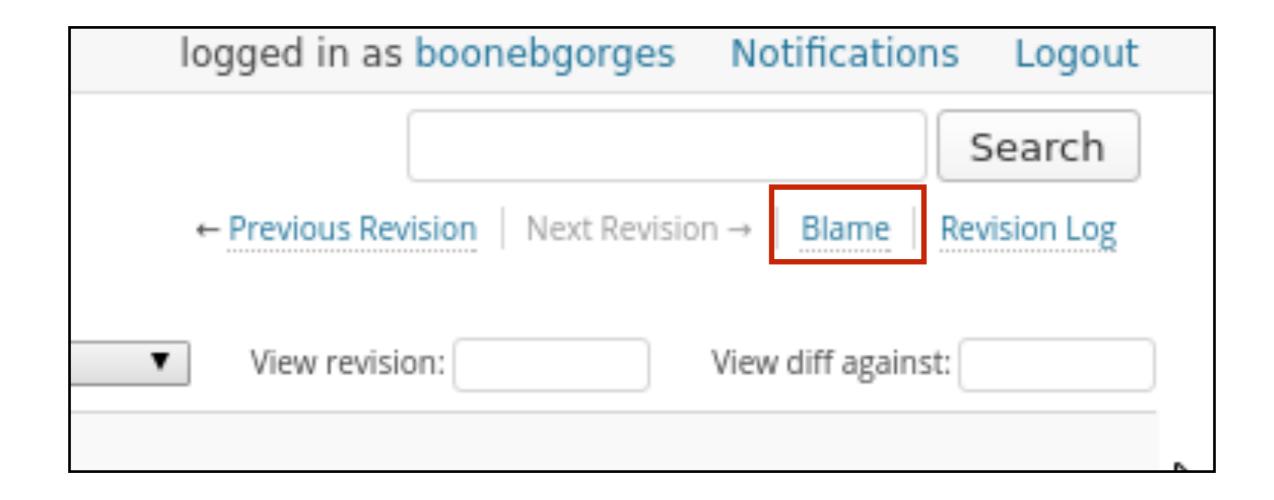
site:make.wordpress.org/core ...

Visualizing the history of the codebase









```
}
2984
2985
             // Don't allow contributors to set the post slug for pe
2986
             if ( 'pending' == $post_status && !current user can( 'pending')
2987
                      $post name = '';
2988
2989
2990
             /*
2991
              * Create a valid post name. Drafts and pending posts a
2992
              * an empty post name.
2993
              */
2994
             if ( empty($post name) ) {
2995
                      if ( !in array( $post status, array( 'draft', '
2996
                              $post name = sanitize title($post title
2997
                      } else {
2998
                              $post name = '';
2999
```

```
$post_category = array();
         2982
         2983
         2984
         2985
                      // Don't allow contributors to set the post
         2986
                      if ( 'pending' == $post status && !current
        2987
                               $post name = '';
[9055]
        2988
        2989
        2990
                      /*
         2991
                       * Create a valid post name. Drafts and pen
         2992
                       * an empty post name.
         2993
         2994
                           empty($post_name) ) {
         2995
                               if ( !in_array( $post_status, array
         2996
                                       $post name = sanitize title
[2948]
         2997
                                 else {
```

?annotate=blame

```
2984
2985
            // Don't allow contributors to set the post slug for pending review posts.
2986
             if ( 'pending' == $post status )
2987
                     $post name = '';
2988
2989
                                             Changeset 28469
2990
             /*
2991
              * Create a valid post name. Dr
                                                Timestamp: 05/17/14 15:52:11 (2 years ago)
2992
              * an empty post name.
2993
                                                     Author: wonderboymusic
2994
             if ( empty($post name) ) {
2995
                                                   Message: Eliminate the use of extract() in wp
                    if ( !in array( $post s
2996
                             $post name = sal
2997
                                                                See #22400.
                     } else {
2998
                             $post name = '
2999
                                                         File:
3000
             } else {
3001
                                                                1 edited
                    // On updates, we need
3002
                     $check name = sanitize
3003
                                                                  trunk/src/wp-includes/post.php (8 di
3004
    if ( $update && strtolower( urlencode(
                                              ☐ Unmodified ☐ Added
                                                                    Removed
                             $post name = $c
3005
                     } else { // new post, o
3006
                                               trunk/src/wp-includes/post.php
                             $post name = sal
3007
                                               r28382 r28469
3008
                                                2924
                                                        2924
                                                                 $postarr = sanitize post($postarr, 'db'
3009
                                                2925
                                                        2925
3010
                                                2926
                                                                 // export array as variables
3011
                                                                 extract($postarr, EXTR SKIP);
                                                2927
             * If the post date is empty (d
3012
              * is not 'draft' or 'pending',
                                                2928
3013
                                                2020
                                                                 // Are we undating or creating?
```

?annotate=blame

```
2984
2985
            // Don't allow contributors to set the post slug for pending review posts.
2986
             if ( 'pending' == $post status )
2987
                     $post name = '';
2988
2989
                                             Changeset 28469
2990
2991
              * Create a valid post name. Dr
                                                Timestamp: 05/17/14 15:52:11 (2 years ago)
2992
              * an empty post name.
2993
                                                     Author: wonderboymusic
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2996
                             $post name = sal
2997
                                                                See #22400.
                     } else {
2998
                             $post name = '
2999
                                                         File:
3000
             } else {
3001
                                                                1 edited
                    // On updates, we need
3002
                     $check name = sanitize
3003
                                                                  trunk/src/wp-includes/post.php (8 di
3004
    if ( $update && strtolower( urlencode(
                                              ☐ Unmodified ☐ Added
                                                                    Removed
                             $post name = $c
3005
                     } else { // new post, o
3006
                                               trunk/src/wp-includes/post.php
                             $post name = sal
3007
                                               r28382 r28469
3008
                                                2924
                                                       2924
                                                                 $postarr = sanitize post($postarr, 'db'
3009
                                                2925
                                                       2925
3010
                                                2926
                                                                 // export array as variables
3011
                                                                 extract($postarr, EXTR SKIP);
                                                2927
              * If the post date is empty (d
3012
              * is not 'draft' or 'pending',
                                                2928
3013
                                                2020
                                                                 // Are we undating or creating?
```

?annotate=blame&rev=28468

```
if (
                            empty($post author) )
         2994
[2647]
                               $post author = $user id;
         2995
[2647]
         2996
                      // Don't allow contributors to set the post slug
         2997
                       if ( 'pending' == $post status && !current user
         2998
                               $post name = '';
         2999
         3000
                      // Create a valid post name. Drafts and pending
         3001
                      // post name.
         3002
[2647]
                       if ( empty($post name) ) {
         3003
                               if ( !in array( $post status, array( 'dr
129871
         3004
                                        $post name = sanitize title($pos
[2948]
         3005
                               else
         3006
                                       $post name = '';
         3007
                       } else {
[2647]
         3008
                               // On updates, we need to check to see i
         3009
                               $check name = sanitize title( $post name
         3010
```

?annotate=blame&rev=28468

```
// Don't allow contributors to set the post slug for pending review posts
         2997
                      if ( 'pending' == $post status )
         2998
                              $post name = '';
         2999
                                                       Changeset 9055
                      // Create a valid post name. Dr
         3001
                      // post name.
         3002
[13770]
[12987]
[2948]
                      if ( empty($post_name) ) {
         3003
                                                          Timestamp: 10/02/08 04:10:54 (8 years ago)
                              if (!in array( $post s
         3004
                                                              Author: markjaquith
                                      Spost name = sa
         3005
                              else
         3006
                                                             Message: Do not allow contributors to set the post slug for pending review posts. fixes #7805
                                      Spost name = '
         3007
                      } else {
         3008
                                                             Location: trunk
                              // On updates, we need
         3009
                                                                 Files:
                              $check name = sanitize
         3010
         3011
                                                                         2 edited
              if ( $update && strtolower( urlencode(
                                      $post name = $c
         3012
                                                                         wp-admin/edit-form-advanced.php (view diffs)
                              else // new post, or sl
         3013
                                                                         wp-includes/post.php (4 diffs)
                                      $post name = sa
         3014
         3015
                                                        Unmodified
                                                                    Added
                                                                             Removed
         3016
                      // If the post date is empty (d
         3017
                                                         trunk/wp-includes/post.php
                      if ( empty($post date) || '0000
         3018
                                                         r8966
                                                                r9055
                              $post date = current til
         3019
                                                          1351
                                                                 1351
         3020
                                                          1352
                                                                 1352
                              // validate the date
         3021
                                                          1353
                                                                           // Create a valid post name. Drafts are allowed to have an empty
                              $mm = substr( $post date
         3022
                                                                 1353
                                                                           // Don't allow contributors to set to set the post slug for pending review posts
                              $jj = substr( $post dat
         3023
                                                                 1354
                                                                           if ( 'pending' == $post status && !current user can( 'publish posts' ) )
                              $aa = substr( $post date
         3024
                                                                               $post name = '';
                                                                 1355
                              $valid date = wp checkd
         3025
                                                                 1356
                              if ( !$valid date ) {
         3026
                                                                 1357
                                                                           // Create a valid post name. Drafts and pending posts are allowed to have an empty
                                      if ( $wp error
         3027
                                                          1354
                                                                 1358
                                                                          // post name.
                                              return
         3028
                                                          1355
                                                                 1359
                                                                           if ( empty($post name) ) {
                                      else
         3029
                                                                               if ( 'draft' != $post status )
                                                          1356
                                               return
         3030
                                                                 1360
                                                                               if (!in array( $post status, array( 'draft', 'pending' ) ))
         3031
                                                          1357
                                                                 1361
                                                                                   $post name = sanitize title($post title);
         3032
```

?annotate=blame&rev=28468

The Trac blame game:

- 1. ?annotate=blame
- 2. Preview the last relevant changeset
- 3. &rev=[changeset 1]
- 4. Repeat

Finding the needle in the haystack

\$ git log

\$ git log

did you know you can contribute to WP using Git?

\$ git clone git://develop.git.wordpress.org

\$ git log

\$ git log --grep

~/sites/wpdev [434]\$ git log --grep wp_insert_post commit 26236ce9100f866697384648e0177a7f868d4f8a

Author: boonebgorges <boonebgorges@602fd350-edb4-49c9-b593-d223

Date: Wed Apr 20 13:53:32 2016 +0000

Add parameter documentation for 'post_category' to `wp_inse

Props Latz.

Fixes #36601.

git-svn-id: https://develop.svn.wordpress.org/trunk@37255 6

commit d183a297cfcb31b4a4e32e2093339625bf4b2323

Author: ericlewis <ericlewis@602fd350-edb4-49c9-b593-d223f7449a

Date: Sun Dec 6 21:57:59 2015 +0000

Posts: Don't modify post_name if it wasn't supplied to `wp_

Previously when updating a post using wp_insert_post(), post regenerated based on post_title every time if post_name was explicitly. This irons out the expectation that proportion

```
$ git log --grep --author
```

```
~/sites/wpdev [435]$ git log --grep wp_insert_post --author boone
commit 26236ce9100f866697384648e0177a7f868d4f8a
Author: boonebgorges <boonebgorges@602fd350-edb4-49c9-b593-d223f74
Date: Wed Apr 20 13:53:32 2016 +0000
   Add parameter documentation for 'post_category' to `wp_insert_
   Props Latz.
   Fixes #36601.
    git-svn-id: https://develop.svn.wordpress.org/trunk@37255 602f
commit 621bb80fda2da6b9e9a7f2ec54a52c5df69d4f4d
Author: boonebgorges <boonebgorges@602fd350-edb4-49c9-b593-d223f74
Date: Wed Sep 16 19:24:51 2015 +0000
   Throw a notice when an invalid tax is passed to `wp_insert_pos
   Props jdgrimes.
    Fixes #25477.
    git-svn-id: https://develop.svn.wordpress.org/trunk@34248 602f
commit 68f620a7daea8d44213b2c0e7adaf69300c900c2
```

```
2984

2985

2986

// Don't allow contributors to set the post slug for pending review posts.

2987

if ('pending' == $post_status && !current_user_can('publish_posts')) {

2988

$post_name = '';

2989

}

2990

2991

* Greate a walid post_pame Drafts and pending posts are allowed to have
```

```
$ git log -S
```

"The Pickaxe"

```
~/sites/wpdev [428]$ git log -S publish_posts --pretty=short commit ef87985d745919eb0ab292fd43be9f503e3cd8a7
```

Author: nacin <nacin@602fd350-edb4-49c9-b593-d223f7449a82>

Simplify the include graph after work to split out classes.

commit 23957b3974faf0accb13263e0c72353fd87c388d

Author: wonderboymusic <wonderboymusic@602fd350-edb4-49c9-b593-d223f744

XML-RPC: `wp.getComments` should be allowed to return approved comm
'` cap.

commit e6a1bf194612abad962e3b3ab41eb9b8b379b4ce

Author: wonderboymusic <wonderboymusic@602fd350-edb4-49c9-b593-d223f744

Posts: move `WP_Post` into its own file. `post.php` loads the new f g `post.php` directly. New files created using `svn cp`.

commit 55f9ba0ee157d327f8e8dd77cb71cf239f3df2ad

Author: wonderboymusic <wonderboymusic@602fd350-edb4-49c9-b593-d223f744

Roles: move classes into their own file. `capbilities.php` loads the loading `capbilities.php` directly. New files created using `svn cp`.

```
~/sites/wpdev [431]$ git show 23957b3974faf0accb13263e0c72353fd87c388d
commit 23957b3974faf0accb13263e0c72353fd87c388d
Author: wonderboymusic <wonderboymusic@602fd350-edb4-49c9-b593-d223f7449
Date: Sat Sep 26 02:48:47 2015 +0000
   XML-RPC: `wp.getComments` should be allowed to return approved comme
'` cap.
   Adds (rewrites) unit tests from 4 years ago that we never committed
   Props wonderboymusic, koke, ericmann, nprasath002.
    Fixes #17981.
   git-svn-id: https://develop.svn.wordpress.org/trunk@34570 602fd350-6
diff --git src/wp-includes/class-wp-xmlrpc-server.php src/wp-includes/cl
index e7b8d64..3011b7a 100644
--- src/wp-includes/class-wp-xmlrpc-server.php
+++ src/wp-includes/class-wp-xmlrpc-server.php
@@ -3155,17 +3155,20 @@ class wp_xmlrpc_server extends IXR_Server {
                $password = $args[2];
                $comment_id = (int) $args[3];
```

\$ git bisect









4.4







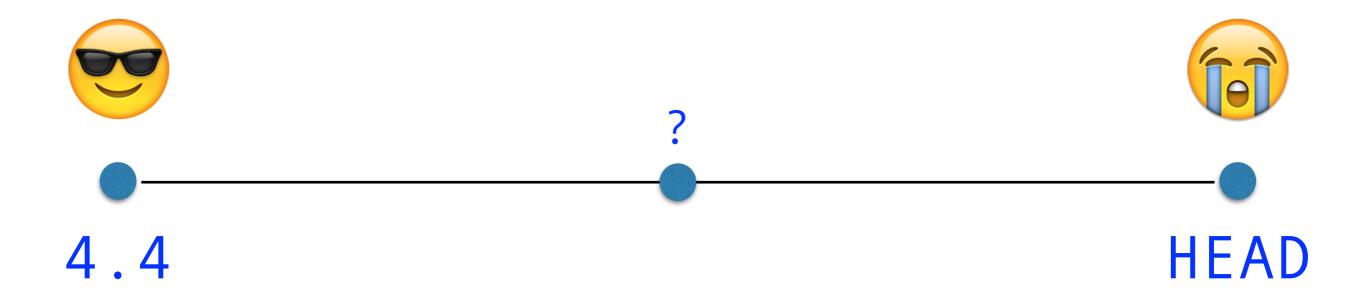


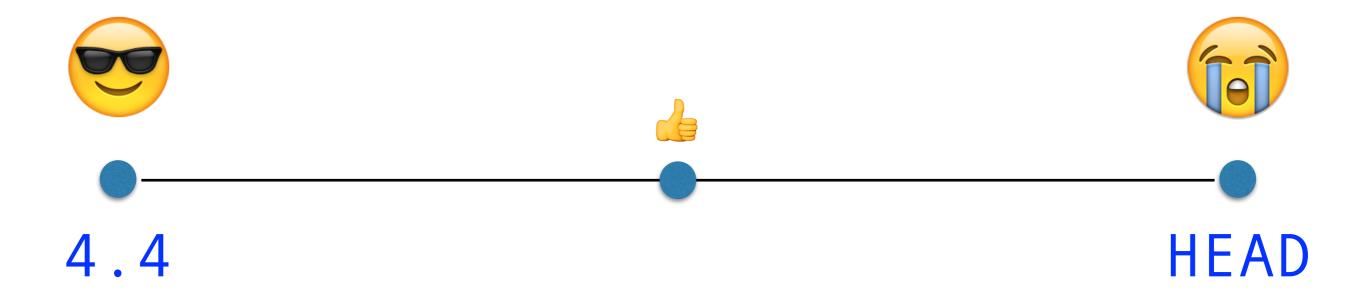


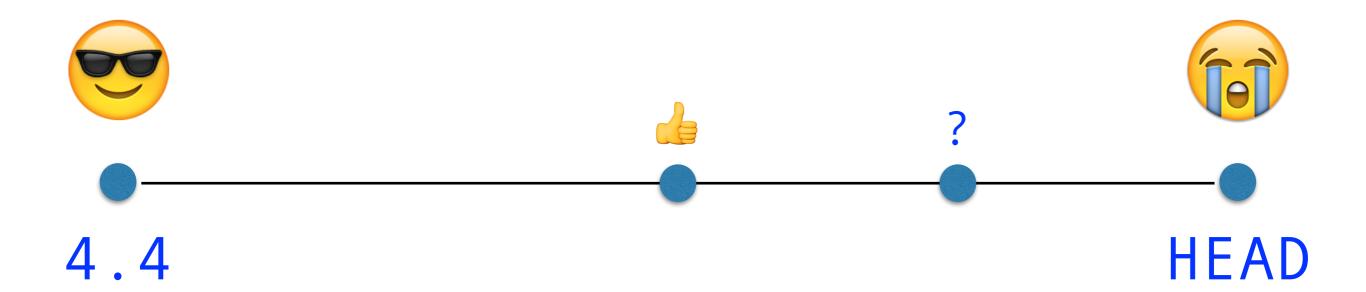
4.4

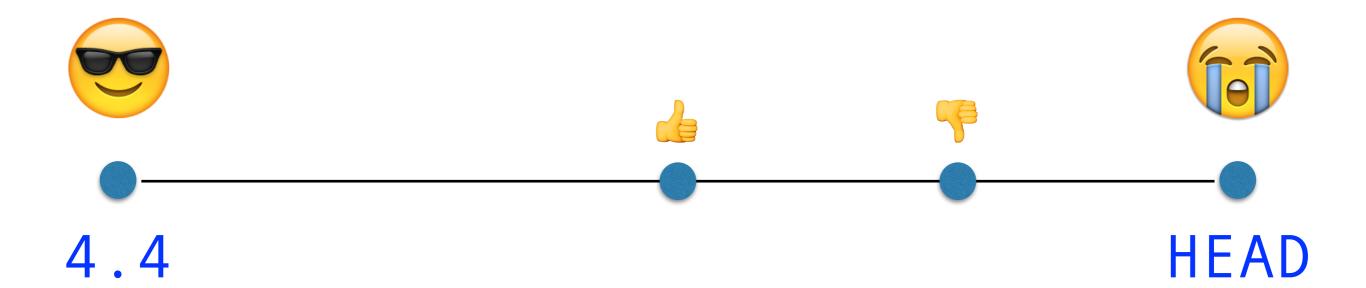
?

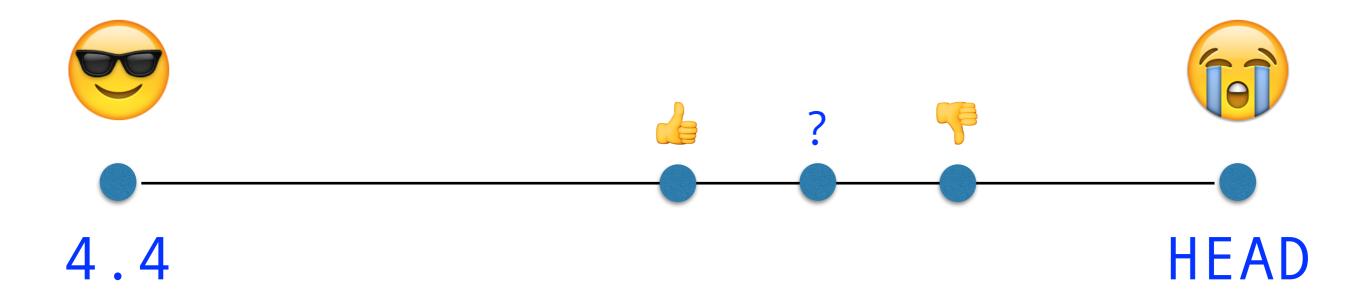
HEAD











```
~/sites/wpdev [449]$ git bisect start
~/sites/wpdev [450]$ git bisect bad
~/sites/wpdev [451]$ git bisect good origin/tags/4.4
Bisecting: a merge base must be tested
[365fe3b9498b5ab7a166fc88812b8ef562b364bc] Add initial_db_version t
~/sites/wpdev [452]$ git bisect good
Bisecting: 927 revisions left to test after this (roughly 10 steps)
[267e1a64357fe52b1fce4da714fd53333187b363] TinyMCE: - Fix the icon
the button on :focus.
~/sites/wpdev [453]$ git bisect bad
Bisecting: 463 revisions left to test after this (roughly 9 steps)
[5bd7a9993fbcb9a8b8b090952b46a0c76b1ca48b] Themes: Show template lo
~/sites/wpdev [454]$ git bisect good
Bisecting: 231 revisions left to test after this (roughly 8 steps)
[2b78d90bb529e8c8caf3d75f71c8361949d01677] Query: `is_*( $int )` sh
```



Thanks