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## A new theme layer for Drupal 8?

with jenlampton, chx, JohnAlbin, mortendk,  
effulgentsia, EclipseGc, & davidneedham



# INTRODUCTIONS

WHO ARE YOU?

# YOU ARE:

Theme developers?  
(D7? D6? D5?)



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New to Drupal?  
(just want to know what the heck is going on in D8)

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Drupal Experts?  
(also want to know what the heck is going on in D8)

# DRUPAL 8 : A NEW THEME LAYER (probably)



# TWIG

A modern template engine for PHP.



<http://twig.sensiolabs.org>



# TWIG

- well documented
- extensible
- secure
- well tested
- IDE integration
- recognizable syntax
  - Python (django)
  - JS (TwigJS)
  - Ruby (Liquid)
- by Symfony's author, Fabien Potencier

# TECHNICAL DIFFICULTIES WITH CONVERTING TO TWIG

(chx)

- Replacing (most of) render
- What's the first patch (a “working example”)
- Removing “layers” (process, preprocess)
- Fitting in with the ‘blocks everywhere’ initiative?
- ?



WHY TWIG?

# CURRENT

```
?>
<article id="node-<?php print $node->nid; ?>" class="<?php print $attributes['class']; ?> clearfix"<?php print $attributes; ?>>
  <?php print render($title_prefix); ?>
  <?php if (!$page): ?>
    <h2<?php print $title_attributes; ?>>
      <a href="<?php print $node_url; ?>" rel="bookmark"><?php print $title; ?></a>
    </h2>
  <?php endif; ?>
  <?php print render($title_suffix); ?>

  <?php if ($display_submitted): ?>
    <footer>
      <?php print $user_picture; ?>
      <p class="submitted"><?php print $submitted; ?></p>
    </footer>
  <?php endif; ?>
```

Drupal only (weird) syntax



# CURRENT

```
?>
<article id="node-<?php print $node->nid; ?>" class="<?php print $attributes['class']; ?> clearfix"<?php print $attributes; ?>>
  <?php print render($title_prefix); ?>
  <?php if (!$page): ?>
    <h2<?php print $title_attributes; ?>>
      <a href="<?php print $node_url; ?>" rel="bookmark"><?php print $title; ?></a>
    </h2>
  <?php endif; ?>
  <?php print render($title_suffix); ?>

  <?php if ($display_submitted): ?>
    <footer>
      <?php print $user_picture; ?>
      <p class="submitted"><?php print $submitted; ?></p>
    </footer>
  <?php endif; ?>
```

Object or Array?

# CURRENT

```
?>
<article id="node-<?php print $node->nid; ?>" class="<?php print $attributes['class']; ?> clearfix"<?php print $attributes; ?>>
  <?php print render($title_prefix); ?>
  <?php if (!$page): ?>
    <h2<?php print $title_attributes; ?>>
      <a href="<?php print $node_url; ?>" rel="bookmark"><?php print $title; ?></a>
    </h2>
  <?php if ($page): ?>
    <?php print render($title_suffix); ?>
  </if>
  <?php if ($display_submitted): ?>
    <footer>
      <?php print $user_picture; ?>
      <p class="submitted"><?php print $submitted; ?></p>
    </footer>
  </if>
</article>
```

print or print render() ?



# CURRENT

```
<?php db_query("DROP TABLE {node}"); ?>
```

PHP is insecure

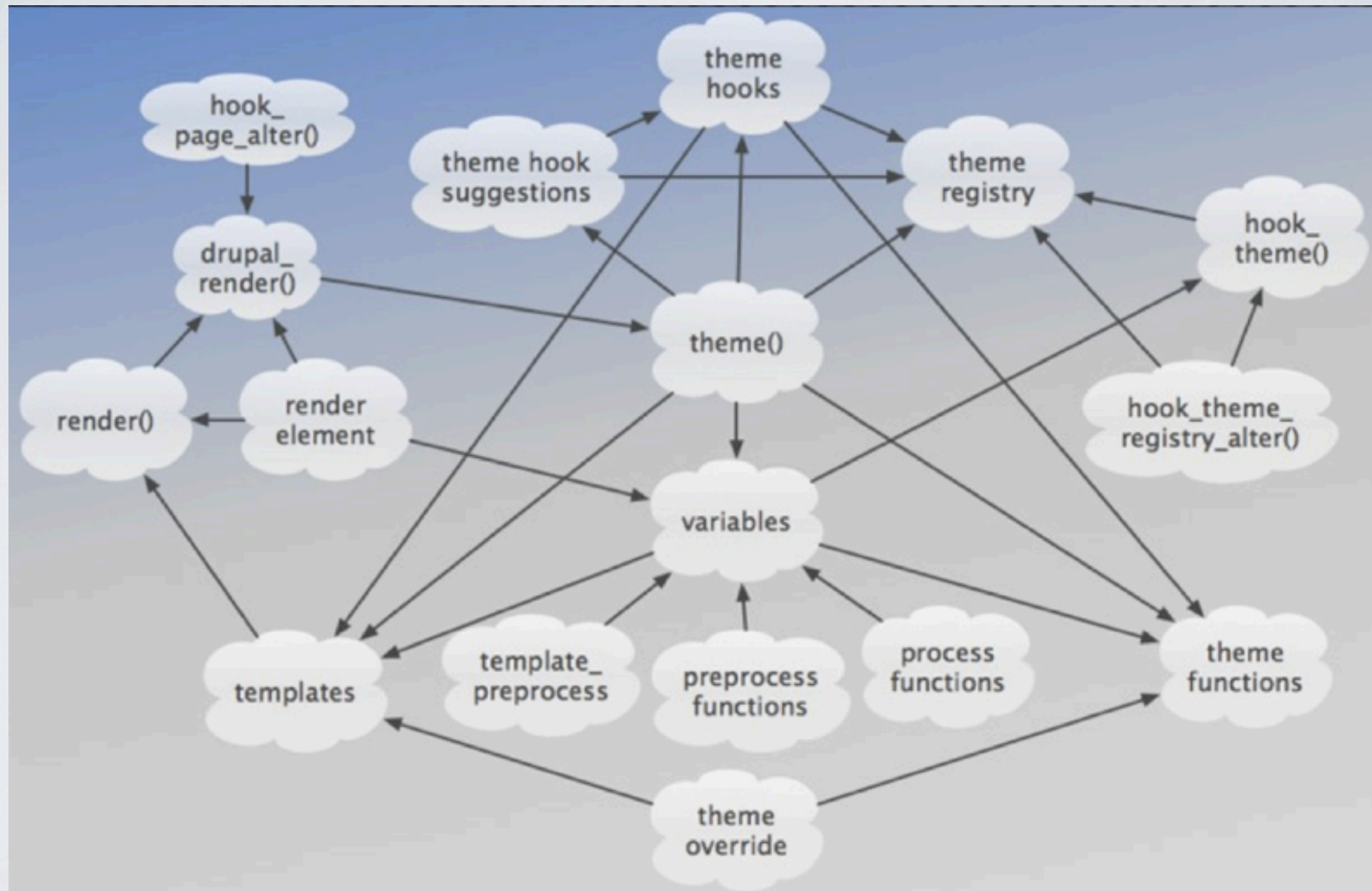
# CURRENT

```
> find . -name "*.tpl.php"
./aggregator/aggregator-feed-source.tpl.php
./aggregator/aggregator-item.tpl.php
./aggregator/aggregator-summary-item.tpl.php
./aggregator/aggregator-summary-items.tpl.php
./aggregator/aggregator-wrapper.tpl.php
./block/block-admin-display-form.tpl.php
./block/block.tpl.php
./block/tests/themes/block_test_theme/page.tpl.php
./book/book-all-books-block.tpl.php
./book/book-export-html.tpl.php
./book/book-navigation.tpl.php
./book/book-node-export-html.tpl.php
./comment/comment-wrapper.tpl.php
./comment/comment.tpl.php
./field/theme/field.tpl.php
./forum/forum-icon.tpl.php
./forum/forum-list.tpl.php
./forum/forum-submitted.tpl.php
./forum/forum-topic-list.tpl.php
./forum/forums.tpl.php
./node/node.tpl.php
./overlay/overlay.tpl.php
./poll/poll-bar--block.tpl.php
./poll/poll-bar.tpl.php
./poll/poll-results--block.tpl.php
./poll/poll-results.tpl.php
./poll/poll-vote.tpl.php
./profile/profile-block.tpl.php
./profile/profile-listing.tpl.php
./profile/profile-wrapper.tpl.php
./search/search-block-form.tpl.php
./search/search-result.tpl.php
./search/search-results.tpl.php
./simpletest/tests/theme_test.template_test.tpl.php
./system/html.tpl.php
./system/maintenance-page.tpl.php
./system/page.tpl.php
./system/region.tpl.php
./taxonomy/taxonomy-term.tpl.php
./toolbar/toolbar.tpl.php
./user/user-picture.tpl.php
./user/user-profile-category.tpl.php
./user/user-profile-item.tpl.php
./user/user-profile.tpl.php
```

Too many template files



# CURRENT



complex mix of subsystems

# WHAT DO WE WANT IN D8?

## **Requested by theme developers:**

- The ability to easily add/change/remove markup
- Consistency in data presented to the theme layer
- Sensible markup defaults / common patterns

## **Requested by developers:**

- A more secure theme layer
- A more performant theme layer

(see <http://bit.ly/P8ZR65>)



# WHAT DO WE WANT IN D8?

**Other stuff?**

# HOW WILL TWIG HELP?

(JohnAlbin's new diagram goes here)



# SO, HOW WILL TWIG HELP?

## **Requested by theme developers:**

- The ability to easily add/change/remove markup

? template files only instead of also theme functions

? cleaner syntax `{}` `{{}}` `{# #}` `{% %}`

- Consistency in data presented to the theme layer

? Data always presented as “drillable”\* objects

- Sensible markup defaults / common patterns

? We'll have to replace it all anyway.

\* we don't know exactly how we are going to do this yet

# HOW WILL TWIG HELP?

## **Requested by developers:**

- A more secure theme layer
- + Auto-escaping makes templates secure
- A more performant theme layer
- + Compiled PHP classes should\* perform better

\* we won't know for sure until we replace *everything*.



# HOW WILL TWIG HELP?

**Other stuff?**

# WHAT ABOUT THE TOOLS WE ALREADY HAVE?

## **Do you like:**

- do you like template file overrides?
- do you like theme function overrides?
- do you love preprocess functions?
- do you use hooks in your theme?
- do you use `_alter()` hooks?



What is your perfect Drupal theme experience?

IF YOU COULD START OVER...

What is your perfect Drupal theme experience?

POSSIBLE? REALISTIC?



1. ?

2. ?

3. ?

WHAT'S MOST IMPORTANT  
FOR DRUPAL 8?

# TWIG

what does it look like?

```
{% if items %}
<{{ type }} class="{{ items.attributes.class }}" {{ items.attributes }}>
{% for item in items %}
  <li class="{{ item.attributes.class }}" {{ item.attributes }}>
    {{- item -}}
  </li>
{% endfor %}
</{{ type }}>
{% endif %}
```



# TWIG

what does it look like?

```
{% if items %}  
  <{{ type }} class="{{ items.attributes.class }}" {{ items.attributes }}>  
  {% for item in items %}  
    <li class="{{ item.attributes.class }}" {{ item.attributes }}>  
      {{- item -}}  
    </li>  
  {% endfor %}  
</{{ type }}>  
{% endif %}
```

print with {{ }}

# TWIG

what does it look like?

```
{% if items %}  
<{{ type }} class="{{ items.attributes.class }}" {{ items.attributes }}>  
{% for item in items %}  
  <li class="{{ item.attributes.class }}" {{ item.attributes }}>  
    {{- item -}}  
  </li>  
{% endfor %}  
</{{ type }}>  
{% endif %}
```

commands with {% %}



# TWIG

what does it look like?

```
{% if items %}  
<{{ type }} class="{{ items.attributes.class }}" {{ items.attributes }}>  
{% for item in items %}  
  <li class="{{ item.attributes.class }}" {{ item.attributes }}>  
    {{- item -}}  
  </li>  
{% endfor %} {# end for loop #}  
</{{ type }}>  
{% endif %}
```

comments with {# #}

# TWIG

what does it look like?

```
{% if items %}  
  <{{ type }} class="{{ items.attributes.class }}" {{ items.attributes }}>  
  {% for item in items %}  
    <li class="{{ item.attributes.class }}" {{ item.attributes }}>  
      {{- item -}}  
    </li>  
  {% endfor %}  
</{{ type }}>  
{% endif %}
```

simple and intuitive



# TWIG

D7

```
function theme_username($variables) {  
  if (isset($variables['link_path'])) {  
    $output = l($variables['name'] . $variables['extra'], $variables['link_path'], $variables['link_options']);  
  }  
  else {  
    $output = '<span' . drupal_attributes($variables['attributes_array']) . '>' . $variables['name'] . $variables['extra'] . '</span>';  
  }  
  return $output;  
}
```

D8

```
{% if link %}  
  <a href="{{ link.path }}" {{ link.attributes }}>{{ name }} {{- extra }}</a>  
{% else %}  
  <span {{ attributes }}>{{ name }} {{- extra }}</span>  
{% endif %}
```

theme\_username becomes username.twig

# TWIG

D7

```
function theme_image($variables) {  
  $attributes = $variables['attributes'];  
  $attributes['src'] = file_create_url($variables['uri']);  
  
  foreach (array('width', 'height', 'alt', 'title') as $key) {  
    if (isset($variables[$key])) {  
      $attributes[$key] = $variables[$key];  
    }  
  }  
  
  return '<img' . drupal_attributes($attributes) . ' />';  
}
```

D8

```

```

theme\_image becomes image.twig



# TWIG

D7

```
function theme_link($variables) {  
  return '<a href="' . check_plain(url($variables['path'], $variables['options'])) . '"  
    . drupal_attributes($variables['options']['attributes']) . '>'  
    . ($variables['options']['html'] ? $variables['text'] : check_plain($variables['text']))  
    . '</a>';  
}
```

D8

```
<a href="{{ path }}" {{ attributes }}>{{ text }}</a>
```

theme\_link becomes link.twig

# TWIG

D7

```
function theme_item_list($variables) {-
  $items = $variables['items'];-
  $title = (string) $variables['title'];-
  $type = $variables['type'];-
  $list_attributes = $variables['attributes'];-

  $output = '';-
  if ($items) {-
    $output .= '<' . $type . drupal_attributes($list_attributes) . '>';-

    $num_items = count($items);-
    $i = 0;-
    foreach ($items as $key => $item) {-
      $i++;-
      $attributes = array();-

      if (is_array($item)) {-
        $value = '';-
        if (isset($item['data'])) {-
          $value .= $item['data'];-
        }-
        $attributes = array_diff_key($item, array('data' => 0, 'children' => 0));-

        // Append nested child list, if any.-
        if (isset($item['children'])) {-
          // HTML attributes for the outer list are defined in the 'attributes'-
          // theme variable, but not inherited by children. For nested lists,-
          // all non-numeric keys in 'children' are used as list attributes.-
          $child_list_attributes = array();-
          foreach ($item['children'] as $child_key => $child_item) {-
            if (is_string($child_key)) {-
              $child_list_attributes[$child_key] = $child_item;-
              unset($item['children'][$child_key]);-
            }-
          }-
          $value .= theme('item_list', array(-
            'items' => $item['children'],-
            'type' => $type,-
            'attributes' => $child_list_attributes,-
          ));-
        }-
      }-
      else {-
        $value = $item;-
      }-

      $attributes['class'][] = ($i % 2 ? 'odd' : 'even');-
      if ($i == 1) {-
        $attributes['class'][] = 'first';-
      }-
      if ($i == $num_items) {-
        $attributes['class'][] = 'last';-
      }-

      $output .= '<li' . drupal_attributes($attributes) . '>' . $value . '</li>';-
    }-
    $output .= "</$type>";-
  }-

  // Only output the list container and title, if there are any list items.-
  // Check to see whether the block title exists before adding a header.-
  // Empty headers are not semantic and present accessibility challenges.-
  if ($output != '') {-
    if ($title != '') {-
      $title = "<h3>" . $title . "</h3>";-
    }-
    $output = "<div class='item-list'>" . $title . $output . "</div>";-
  }-

  return $output;-
}
```

D8

```
{% if items %}-
<{{ type }} class="{{ attributes.class }}" {{ attributes }}>-
{% for item in items %}-
  <li class="{{ item.attributes.class }}" {{ item.attributes }}>-
    {{- item -}}-
  </li>-
{% endfor %}-
</{{ type }}>-
{% endif %}-
```

theme\_item\_list becomes item\_list.twig



DO WE GO WITH TWIG?

HOW DO WE GET THERE?



DISCUSS!



<http://bit.ly/O6XPFA>

# A NEW THEME LAYER FOR D8

with jenlampton, chx, JohnAlbin, mortendk, effulgentsia, EclipseGc, davidneedham



## credits:

DrupalCon Munich Slide Deck:  
<http://munich2012.drupal.org/speakers/speaker-resources>

Drupal 7 Theme layer image  
by John Albin Wilkins

Drupal 8 Theme layer image  
by John Albin Wilkins