



**DrupalCamp Costa Rica 2018**

# Paragraphs In Depth

**4 AUGUST 2018**

# Introduction



**Jonathan Hedstrom**

SOFTWARE ARCHITECT

**Email:** [jhedstrom@phase2technology.com](mailto:jhedstrom@phase2technology.com)

**Drupal.org:** [jhedstrom](#)

**Twitter:** [jhedstro](#)

## Drupal contributions

- Core contributor
- Core maintainer
- Drupal Behat Extension lead
- Drush maintainer
- Message Stack maintainer

## Recent DrupalCon presentations

- Building MSK on Drupal 8
- What's New in Drush



A top-down view of a wooden desk. On the left, a portion of a silver laptop is visible, showing its keyboard and trackpad. On the right, there is a small succulent plant with thick, pointed leaves and a few small white flowers. In the center of the desk, there are several small, round, spiral-shaped objects. A dark blue rectangular box with a thin white border is centered on the desk, containing the text "WHAT ARE PARAGRAPHS?".

# WHAT ARE PARAGRAPHS?



*With the Paragraphs module, Editors can build pages using pre-defined components instead of one consolidated body field.*

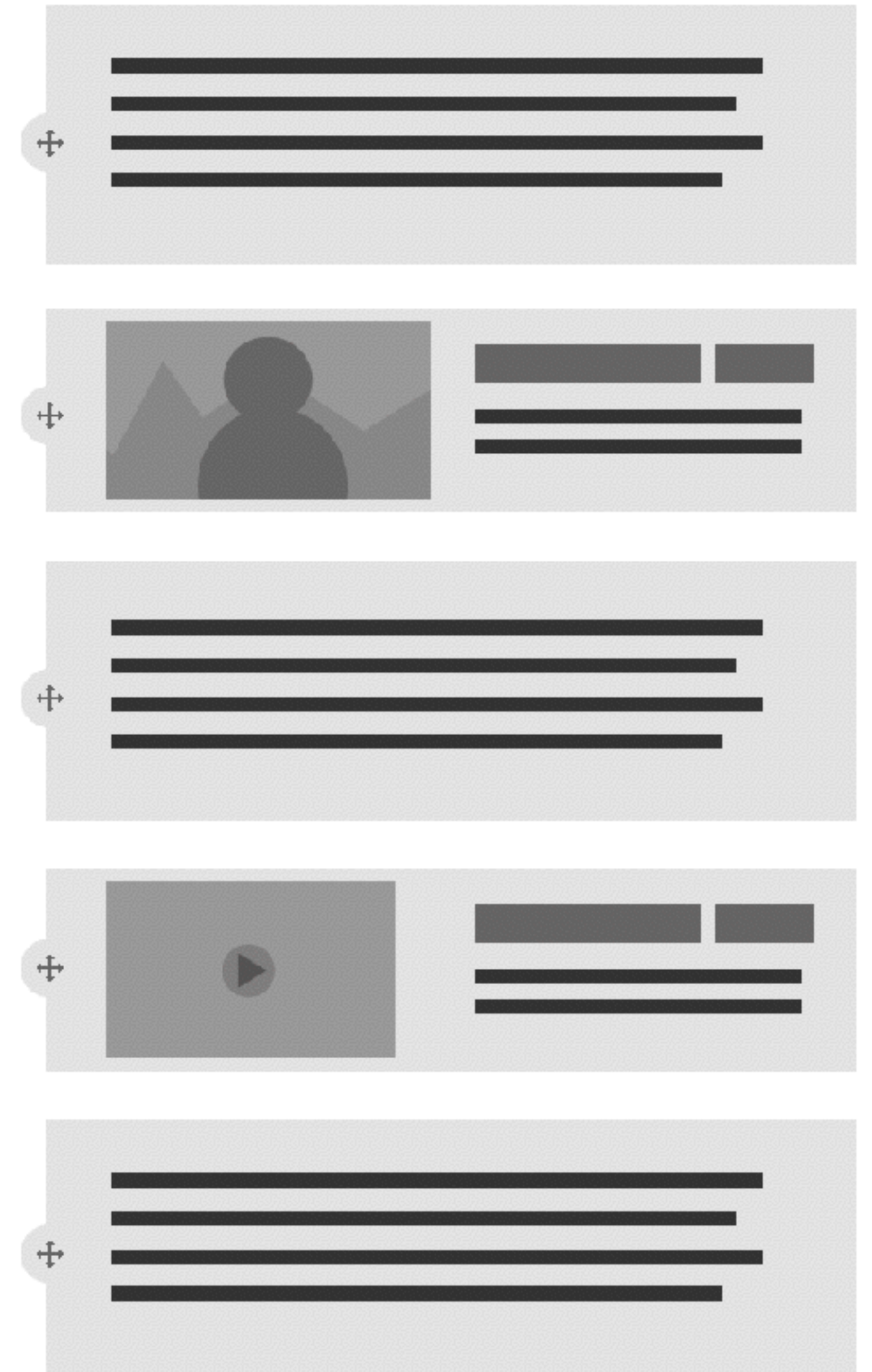
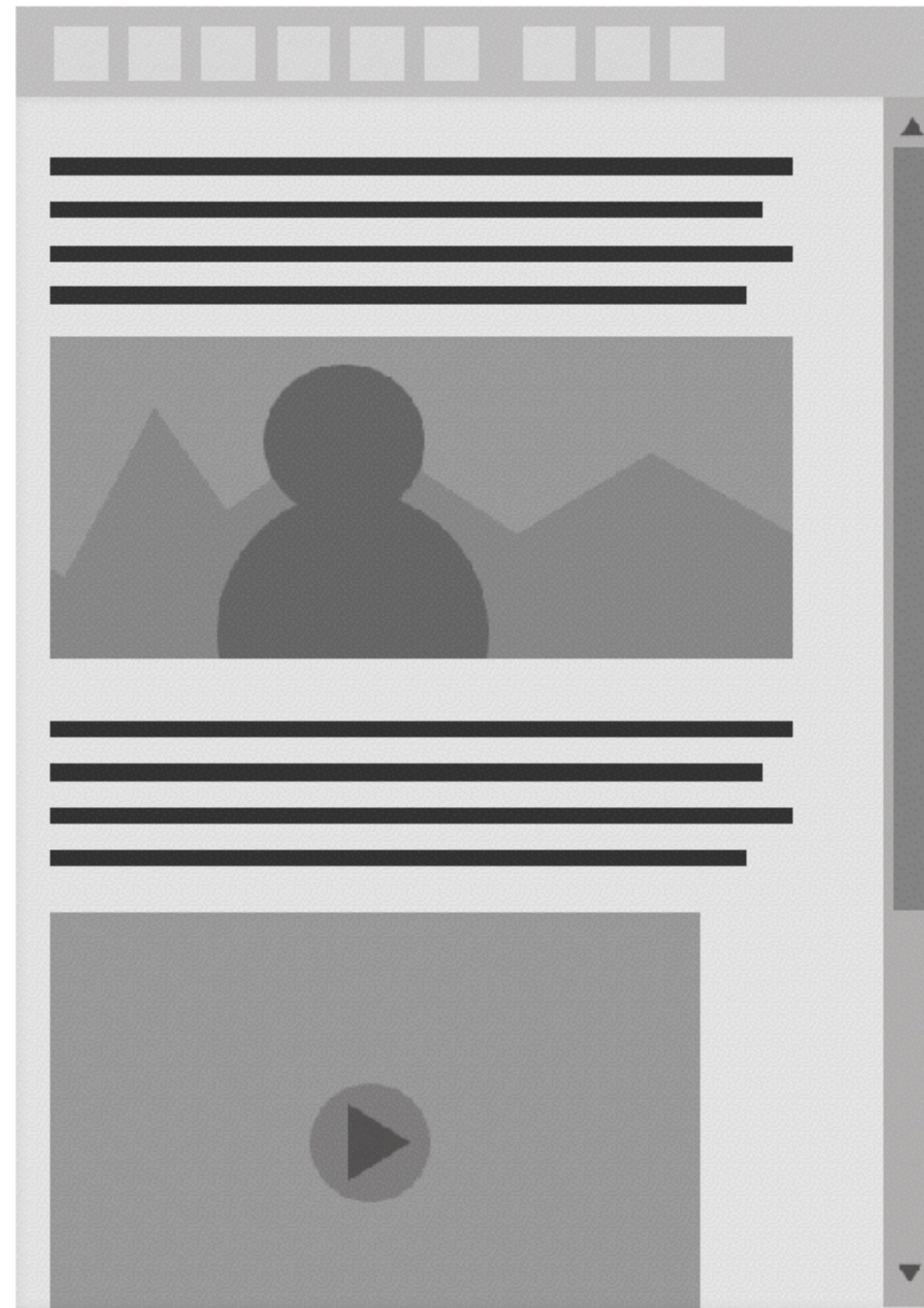
*These components can be anything from something simple, like a block of text, to something more complex, like a slideshow.*

**~ Adapted from Paragraph  
Module Documentation**



# What is a Paragraph?

## PARAGRAPHS MODULE



# WHAT DOES THE MODULE DO?

- Adds Paragraph field that allows for reusable components to be added to pages.
- Components have unique fields and sub-forms for editing.
- These components are referred to as Paragraph Types.



# WHAT ARE THE BENEFITS?

- Reduces complexity of building unique page layouts
- More obvious and intuitive for editors
- Consolidates page-specific content to single edit form
- Easy for Developers to add new paragraph types





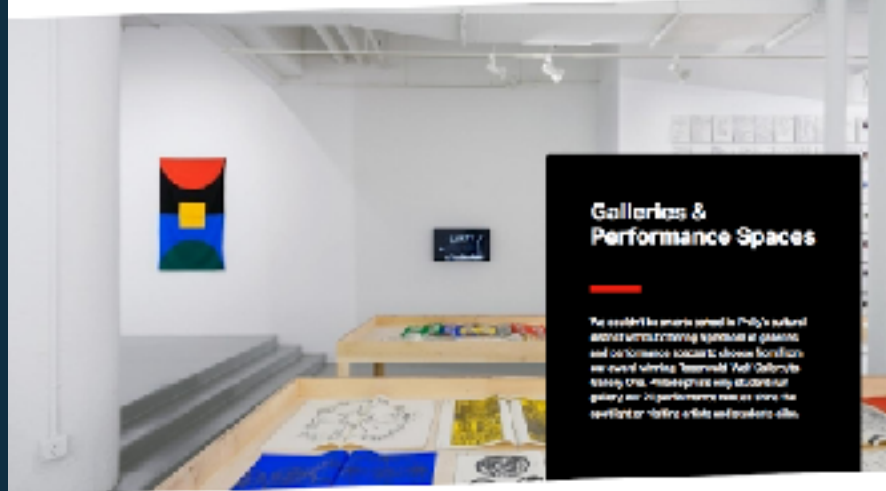
# About UArts

We've been focusing on excellence in the study of the arts for 140 years.

Why are we so focused on excellence? Through 140 years of dedicated teaching, research, and creative practice, we've developed a unique and innovative program that has attracted over 100,000 students from around the world.

**Innovative education for 140 years**

Over 140 years of innovative education, we've developed a unique and innovative program that has attracted over 100,000 students from around the world.



## Galleries & Performance Spaces

The world's most renowned performing arts and visual arts spaces are housed in our state-of-the-art facilities. From the historic University City Center to the modern, award-winning University City Center, we offer a wide range of spaces for your next performance or exhibition.

Why have we been so successful in the study of the arts for 140 years?

Our success is due to our unique environment, our state-of-the-art facilities, and our commitment to excellence in teaching, research, and creative practice. We've developed a unique and innovative program that has attracted over 100,000 students from around the world.

**It was in July 2015, President David Yong began his tenure at UArts as the university's president.**

During his tenure, he has led the university through a period of significant growth and innovation. He has focused on enhancing the quality of education, expanding our global reach, and fostering a culture of excellence in the arts.

**President David Yong**  
Office of the President  
Administrative & Academic Affairs  
Floor of the Center

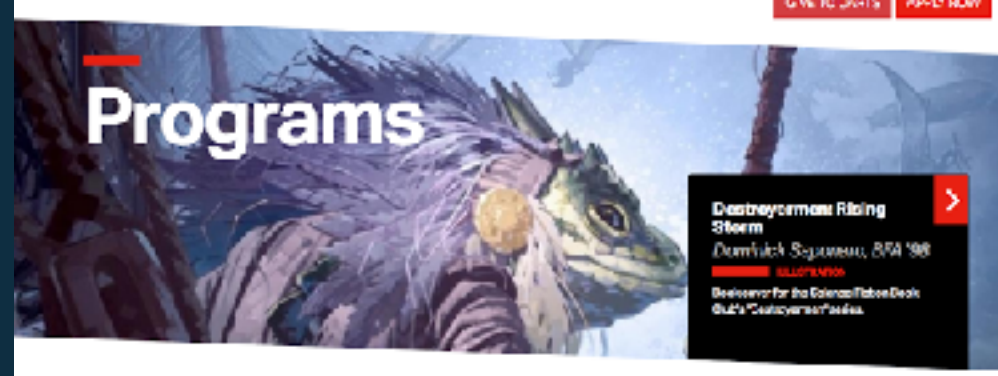
[Leadership & Vision](#)

**The University of the Arts is located downtown Philadelphia in the vibrant Center City.**

Our location is a major advantage, providing easy access to the city's cultural and business districts. We offer a wide range of programs and facilities, making us a premier destination for students and faculty alike.

**Office of the President**  
Office of the President  
Administrative & Academic Affairs  
Floor of the Center

[Visit Us Today](#)



# Programs

**Destroyer Rising Steam**  
Dumfries Square, 87A '14  
Bachelor of Fine Arts (BFA) in Game Design  
Bachelor of Fine Arts (BFA) in Game Design

With a unique artist environment that encourages risk taking and exploration, visual artists, dancers, designers, actors, writers, filmmakers, and musicians can find the creative path in their desired area of study.

## Areas of Interest

Majors and Concentrations | Minors | Grad School Programs

Learn more about the various programs offered by the University of the Arts.

**Acting** | **Animation** | **BFA/MAT in Visual Arts Education** | **BFA/MAT in Music Education**

**Ceramics** | **Contemporary** | **Creative Writing** | **Dance**

**Directing, Playwriting + Production** | **Fiber + Textile Studies** | **Film** | **Game Art**

**Glass** | **Glass** | **Graphic Design** | **Illustration**

[See More](#)

**Art for all ages**

Explore our diverse and exciting programs for children, teens, and adults.

[Pre-College](#)

**Have a question?** [Request Form](#)

**Contact Admissions & Aid**  
Office of Admissions  
admissions@uarts.edu  
610-291-9129 (toll-free)  
Office of Student Financial Services  
tuition@uarts.edu  
610-291-9129

**Follow UArts Admissions**



# gallery of work

**Peaceful Dreamer**  
Brendan Gallagher, BFA '14  
This is a description of the work.

[View This](#)

**Chorus Line**  
Description of performance piece here.

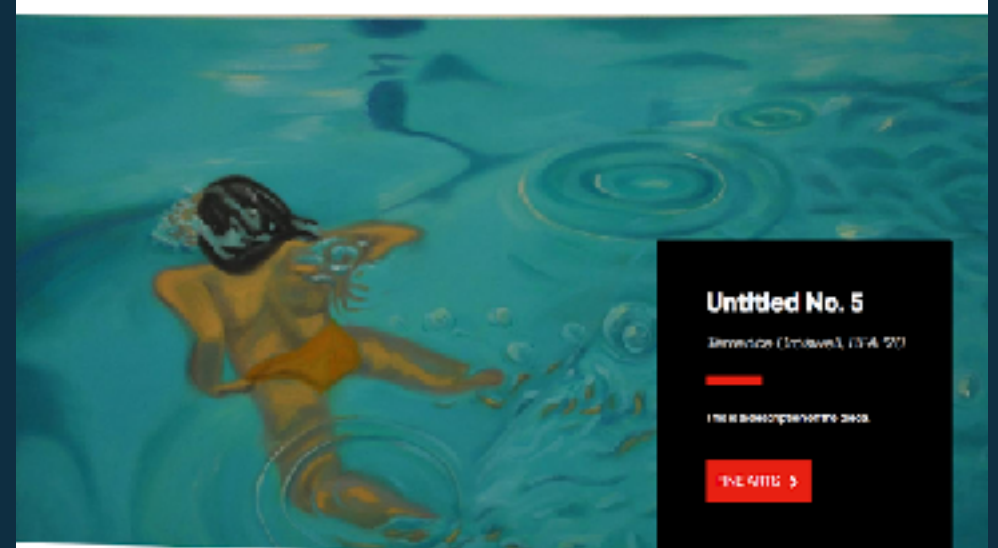
[View This](#)

**Wood Lounge**  
Wood Lounge is a contemporary art installation by [Artist Name].

[View This](#)

**Home of Art**  
Home of Art is a contemporary art installation by [Artist Name].

[View This](#)



Search by title |  |  |

**Share your work**

Learn how to submit your work to our gallery.

[Contribute to UArts Gallery Work](#)

**The Phone Call**  
Erica Fisher, BFA '13  
This is a description of the work.

[View This](#)



# Art Majors and Minors

At UArts you will receive the guidance to turn your artistic passion into a career. Choose from over 10 art majors and have the choice of almost any minor at the university.

**Advertising Practises**  
This minor is open to students majoring in BFA and BFA.

[School of Art](#)

**Art Therapy**  
This minor is open to students majoring in BFA and BFA.

[School of Art](#)

**Animation**  
This minor is open to students majoring in BFA and BFA.

[Study Animation](#)

**Glass**  
Available as a concentration under BFA and BFA.

[Study Glass](#)

**Printmaking and Book Arts**  
Available as a minor under the College of Fine Arts.

[School of Fine Arts](#)

**Painting and Drawing**  
Available as a BFA in Fine Arts with a Painting & Drawing concentration or a BFA in Fine Arts with a Painting & Drawing concentration.

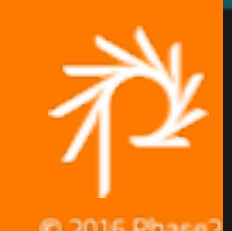
[Painting and Drawing](#)

**Game Art**  
Available as a BFA in Game Design through the College of Fine Arts.

[Game Art and Game Design](#)

**Craft and Material Studies**  
Available as a BFA in Craft and Material Studies through the College of Fine Arts.

[Craft and Material Studies](#)





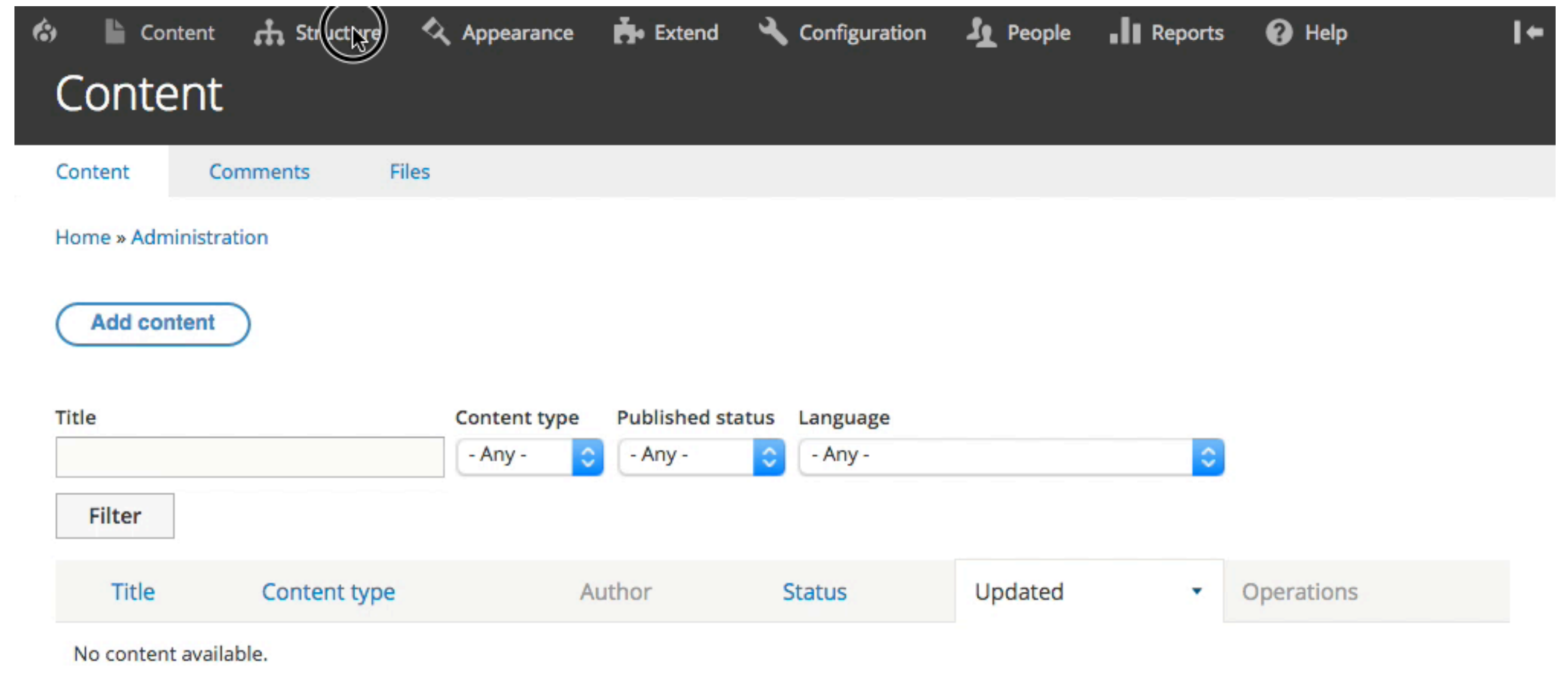
# CREATING A PARAGRAPH TYPE



## Creating a new Paragraphs type

1. Admin > Structure > Paragraphs Types
2. Add Paragraphs Type
3. Manage fields to add new fields to Paragraph

# NEW TYPE



The screenshot shows the Drupal 8 administration interface. At the top, there is a navigation bar with icons for Content, Structure, Appearance, Extend, Configuration, People, Reports, and Help. Below this, the 'Content' page is displayed, with tabs for 'Content', 'Comments', and 'Files'. The breadcrumb trail reads 'Home » Administration'. A blue 'Add content' button is visible. Below the button, there are filters for 'Title', 'Content type' (set to '- Any -'), 'Published status' (set to '- Any -'), and 'Language' (set to '- Any -'). A 'Filter' button is located below these filters. At the bottom, a table header is shown with columns: 'Title', 'Content type', 'Author', 'Status', 'Updated', and 'Operations'. The table body is empty, displaying the message 'No content available.'



# Manage Displays

## Manage form and display settings

- Manage form display
  - Order the field elements for each paragraph type
  - Hide fields that aren't needed in a node edit form
- Manage display
  - Arrange fields in the desired display order
  - Hide fields that shouldn't be displayed in their default states
  - Change images to use the correct Image Style instead of using the original, fully-size images



# PARAGRAPHS ON NODES



# Add a Paragraph field to a content type

1. Add a new field

2. Name the field

**ADD**

Add a new field

- Select a field type -

- Number (float)
- Number (integer)
- Reference**
- Content
- File
- Image
- Media
- Taxonomy term
- User
- Other...
- Reference revisions**
- Paragraph**
- Other...
- Text**
- List (text)
- Text (formatted)
- Text (formatted, long)
- Text (formatted, long, with summary)
- Text (plain)
- Text (plain, long)

Re-use an existing field

- Select an existing field -

## Add a Paragraph field to a content type

3. Select the type of **Entity Reference Revision**; this will be Paragraph
4. Set the field cardinality; this will almost always be **Unlimited**

ADD

Type of item to reference \*

Paragraph

Allowed number of values

Unlimited

Save field settings



# Add a Paragraph field to a content type

3. Select the type of **Entity Reference Revision**; this will be Paragraph

4. Set the field cardinality; this will almost always be **Unlimited**

**ADD**

Reference method \*

Default

Paragraph types

Show row weights

TYPE
<input checked="" type="checkbox"/> Basic HTML
<input checked="" type="checkbox"/> Buttons
<input checked="" type="checkbox"/> Multiple Cards
<input type="checkbox"/> Block List
<input type="checkbox"/> Card
<input checked="" type="checkbox"/> Large Image
<input checked="" type="checkbox"/> Links Callout
<input checked="" type="checkbox"/> People
<input type="checkbox"/> Info

# Add a Paragraph field to a content type

ADD

+ Add field + Add Update field

LABEL	MACHINE NAME	FIELD TYPE	OPERATIONS
Background Image	field_bpage_bg_image	Entity reference	Edit
Body (Slices)	field_bpage_body_slices	Entity reference revisions	Edit
Card Button	field_bpage_card_button	Link	Edit
Card Headline	field_bpage_card_headline	Text (plain)	Edit
Card Label	field_bpage_card_label	Text (plain)	Edit
Card Subheadline	field_bpage_card_subheadline	Text (plain)	Edit
Card Summary	field_bpage_card_summary	Text (formatted, long)	Edit
Headline	field_bpage_headline	Text (plain)	Edit







# THEMING PARAGRAPH FIELDS



## An un-themed Paragraph gallery

Paragraphs with no template will display whatever is set in the display mode for each field.

# RAW FIELD

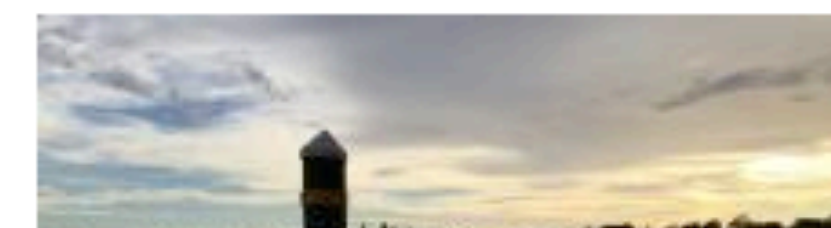
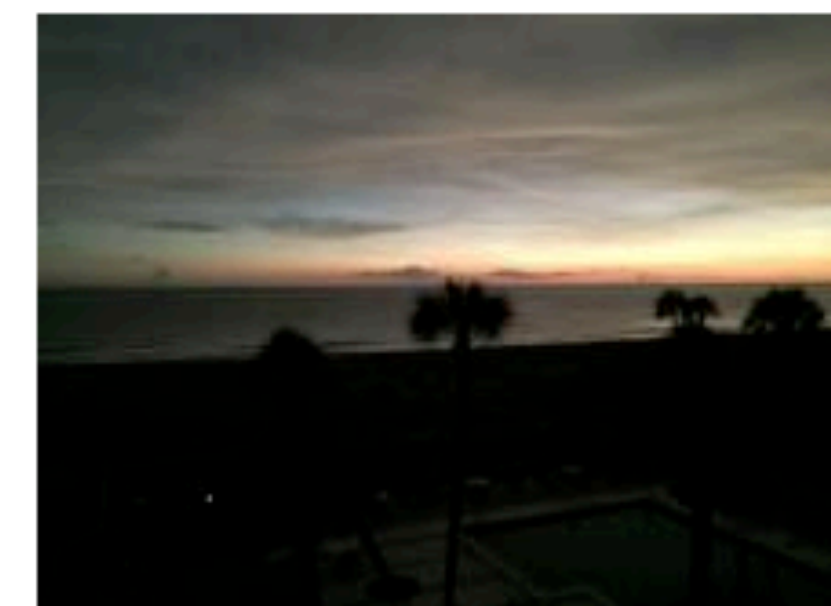
### Test Article

[View](#)[Edit](#)[Delete](#)

Submitted by [admin](#) on Tue, 08/01/2017 - 05:32

This is the body text of an article.

This is the new gallery Paragraph type



# Paragraph Type Templates

## Theming Paragraphs for Drupal 8

Default template is paragraph.html.twig

### Common template suggestions

- paragraph\_\_[view\_mode]
  - paragraph--default.html.twig
- paragraph\_\_[type]
  - paragraph--quote.html.twig
  - paragraph--gallery.html.twig
- paragraph\_\_[type]\_\_[view\_mode]
  - paragraph--gallery--default.html.twig



# Paragraph Field Templates

## Field Templates for Paragraphs

Field markup is the wrapper around the Paragraph template.

### Template suggestions for fields that contain Paragraphs

- `field__paragraph__[field_name]`
  - `field—paragraph—field-slices.html.twig`

The field items in this template will be the Paragraph template's markup.



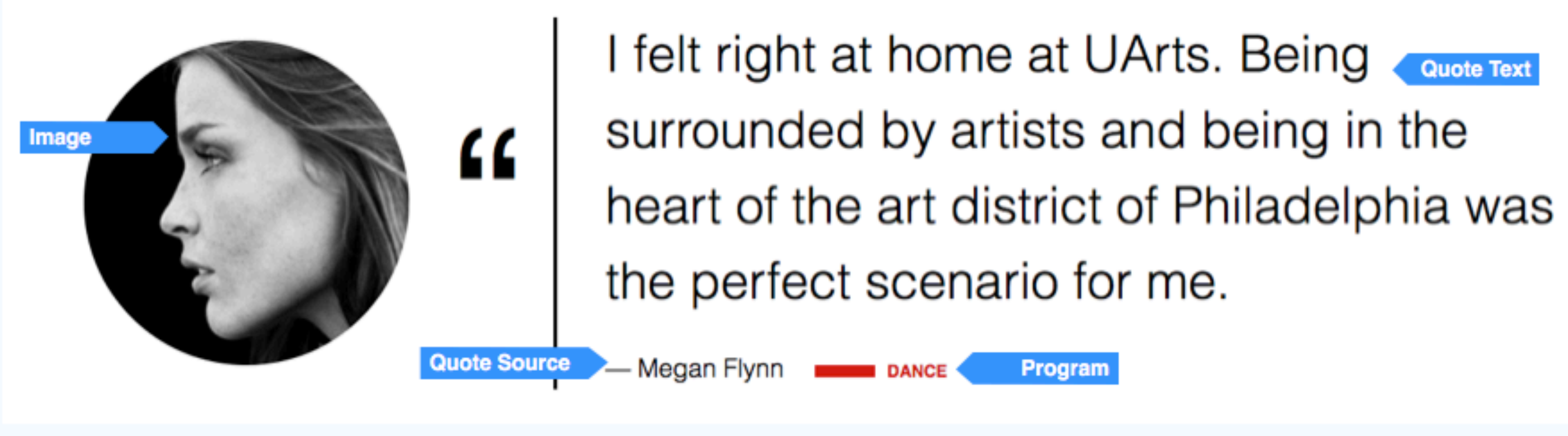
# A Quote Paragraph Type

# QUOTE

**BODY (SLICES)**

Quote Remove

▼ **SAMPLE SCREENSHOT**



The screenshot shows a quote paragraph type with a circular image of a woman on the left, a vertical line with a double quote symbol in the center, and the quote text on the right. Below the quote is the source information: "— Megan Flynn" followed by "DANCE" and "Program".

**IMAGE**

Add new media Add existing media

**Quote Text**

**Quote Source**

Quote Source: Maximum characters 255.

**Program**


# A Quote Paragraph Type

## BODY (SLICES)

Quote

SAMPLE SCREENSHOT

### IMAGE

MEDIA NAME	THUMBNAIL	OPERATIONS
animation		<input type="button" value="Edit"/> <input type="button" value="Remove"/>

### Quote Text

Demo Quote Content

### Quote Source

Demo

Quote Source: Maximum characters 255.

### Program

QUOTE

# A Quote Paragraph Type



THE UNIVERSITY OF THE ARTS

APPLY PEOPLE GALLERY PROGRAMS

VISIT REQUEST INFO GIVE

GIVE TO UARTS

APPLY LATER

share

# Demo Page

## Demo Page Headline

The is the Demo Page content in the Summary field.



Demo Quote Content

— Demo

QUOTE



© 2016 Phase2

# paragraph--quote.html.twig (Drupal Theme)

```
<div class="quote">
  
  <div class="quote__content">
    <div class="quote__words">{{ paragraph.field_quote_text.value }}</div>
    {% if paragraph.field_quote_source.value is not empty or
      paragraph.field_quote_program_tag.0.entity.name.value is not empty %}
      <div class="quote__caption">
        {% if paragraph.field_quote_source.value is not empty %}
          — {{ paragraph.field_quote_source.value }}
        {% endif %}
        {% if paragraph.field_quote_program_tag.0.entity.name.value is not empty %}
          {{ paragraph.field_quote_program_tag.0.entity.name.value }}
        {% endif %}
      </div>
    {% endif %}
  </div>
</div>
</div>
</div>
<div>
```





# paragraph--quote.html.twig (better Drupal Theme)

```
{% set data = {
  imgSrc: paragraph.field_quote_image.entity.image.entity.fileUri() | image_style('square_500x500'),
  body: paragraph.field_quote_text.value,
  source: paragraph.field_quote_source.value,
  program: paragraph.field_quote_program_tag.0.entity.name.value
} %}

<div class="quote">
  
  <div class="quote__content">
    <div class="quote__words">{{ data.body }}</div>
    {% if data.source is not empty or data.program is not empty %}
      <div class="quote__caption">
        {% if data.source is not empty %}— {{ data.source }} {% endif %}
      </div>
    {% endif %}
  </div>
</div>
<div>
```



# paragraph--quote.html.twig (Pattern Lab)

```
{% set data = {  
  imgSrc: paragraph.field_quote_image.entity.image.entity.fileUri() | image_style('square_500x500'),  
  body: paragraph.field_quote_text.value,  
  source: paragraph.field_quote_source.value,  
  program: paragraph.field_quote_program_tag.0.entity.name.value  
}%}
```

```
{% include '@organisms/quote.twig' with {  
  imgSrc: data.imgSrc,  
  body: data.body,  
  source: data.source,  
  major: data.program  
}%}
```



# @organisms/quote.twig

```
<div class="quote">
  {% include '@atoms/_img.twig' with {
    class: 'quote__image',
    img: imgSrc
  } %}
  <div class="quote__content">
    <div class="quote__words">{{ body|default(random(longTitles)) }}</div>
    {% if source is not empty or major is not empty %}
      <div class="quote__caption">
        {% if source is not empty %}— {{ source }} {% endif %}
        {% if major is not empty %}
          {% include '@atoms/divider.twig' with {
            person: true,
            subhead: major
          } %}
        {% endif %}
      </div>
    {% endif %}
  </div>
</div>
```



# Preprocessing

## Preprocess hooks and data map in templates

Preprocessing allows you to create, set, or modify variables and their values

Data maps allow you to set the finalized form of the variable to pass to an imported Twig template; this allows your templates to use default values in Pattern Lab

```
MYMODULE_preprocess_paragraph(&$variables)
```

```
MYMODULE_preprocess_paragraph__PARAGRAPH_TYPE(&$variables)
```



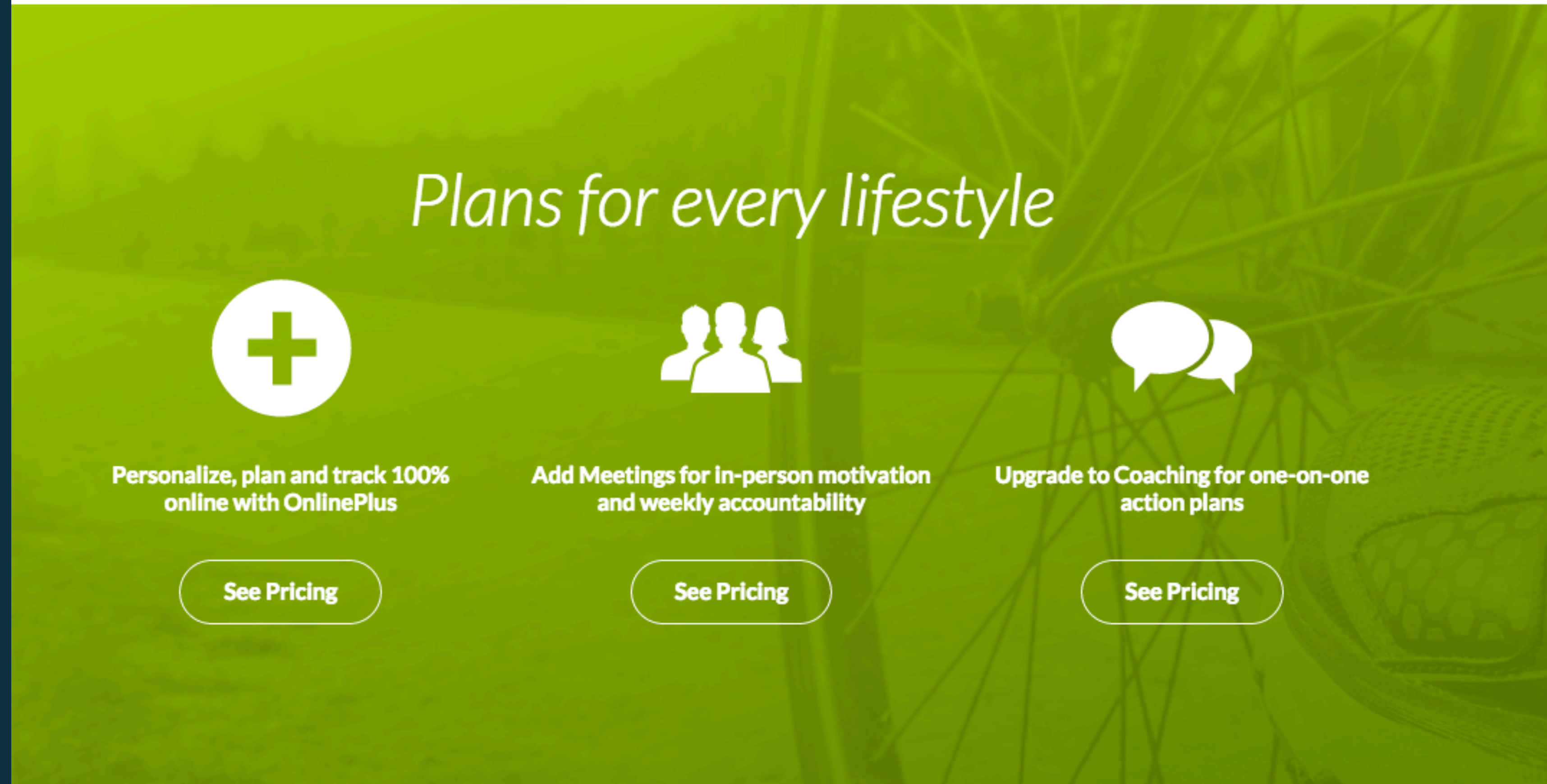
# NESTED PARAGRAPHS



# NESTED PARAGRAPH

## Title text

1. 3 column layout
2. Each item is a paragraph
3. The green background image belongs to the parent paragraph



*Plans for every lifestyle*

Personalize, plan and track 100% online with OnlinePlus

[See Pricing](#)

Add Meetings for in-person motivation and weekly accountability

[See Pricing](#)

Upgrade to Coaching for one-on-one action plans

[See Pricing](#)



# NESTED PARAGRAPH

## Icon List

Show row weights

Icon List type: *BTS2 Icon List Item*



Personalize, plan and track 100% online with OnlinePlus

Edit

Remove

Icon List type: *BTS2 Icon List Item*



Add Meetings for in-person motivation and weekly accountability

Edit

Remove

Icon List type: *BTS2 Icon List Item*



Upgrade to Coaching for one-on-one action plans

Edit

Remove

Add icon list items. Usually 2, 3 or 4.

Add *BTS2 Icon List Item*

▼ Slice Style

Remove icon background circles

Control Panel

▸ Background

▸ Floaty



# Preprocessing

## Getting parent Paragraph entities

```
$parent_id = $paragraph->getParentEntity();
```

```
if (!empty($parent_id)) {  
    $parent = Paragraph::load($parent_id);  
}
```

```
$parent_entity = $entity->_referringItem->getEntity();
```





## Getting parent Paragraph

### From A Class

```
$parent_id = $paragraph->getParentEntity();  
  
if (!empty($parent_id)) {  
    $parent = $this->entityTypeManager->getStorage('paragraph')  
        ->load($parent_id);  
}
```





**QUESTIONS?**

