

BindingRestElement Binding Pattern

A Comedy of Errors? A useful pattern?

ES6 Grammar

ArrayBindingPattern[Yield] :

``[` Elision? BindingRestElement?[?Yield] `]``

``[` BindingElementList[?Yield] `]``

``[` BindingElementList[?Yield] `,` Elision? BindingRestElement?[?Yield] `]``

BindingRestElement[Yield] :

``...` BindingIdentifier[?Yield]`

ArrayAssignmentPattern[Yield] :

``[` Elision? AssignmentRestElement?[?Yield] `]``

``[` AssignmentElementList[?Yield] `]``

``[` AssignmentElementList[?Yield] `,` Elision? AssignmentRestElement?[?Yield] `]``

AssignmentRestElement[Yield] :

``...` DestructuringAssignmentTarget[?Yield]`

What does it mean?

```
[ ... [ ... x ] ] = [1, 2, 3];  
// Ok, AssignmentRestElement allows a  
DestructuringAssignmentTarget
```

```
let [ ... [ ... x ] ] = [1, 2, 3];  
// Syntax error, BindingRestElement only allows a BindingIdentifier
```

Why?

- Historical accident?
- Bug filed on error thrown by having an array literal after a rest.
 - https://bugs.ecmascript.org/show_bug.cgi?id=3361
- Bug "fixed" by allowing AssignmentRestElement to be a binding pattern.
- Did not update BindingRestElement at the same time.

Possible Avenues

1. Keep as is.
2. Remove support for a binding pattern in a rest element.
3. Align AssignmentPattern with BindingPattern to allow further destructuring of the rest element.

```
BindingRestElement[Yield] :  
  `...` BindingIdentifier[?Yield]  
  `...` BindingPattern[?Yield]
```

Plus necessary static and runtime semantics to align with
BindingPattern