From the relationship between W^+ and W^-:

$$W^+ = a \cdot d \cdot {W^-}^s + a \cdot (1-d) \cdot \hat{W^-}^s$$

where $\hat{W^-}$ is the independent copy of W^-. Applying the double integral, the probability of W^+ is thus the following:

$$\begin{aligned} P(W^+ > x) &= P(d \cdot {W^-}^s + (1-d) \cdot \hat{W^-}^s > \frac{x}{a}) \\ &= (\frac{c_1}{c})^{-\beta} + (\frac{c_2}{c})^{-\beta} - (\frac{c_1 c_2}{c^2})^{-\beta} \end{aligned}$$

where c_1 is the integral boundary value for W^-: $c_1 = \frac{1}{d}^{\frac{1}{s}} \cdot (\frac{x}{a} - (1-d) \cdot c^s)^{\frac{1}{s}}$; and c_2 for $\hat{W^-}$: $c_2 = \frac{1}{1-d}^{\frac{1}{s}} \cdot (\frac{x}{a} - d \cdot c^s)^{\frac{1}{s}}$. Hence the power law distribution:

$$\lim_{x \to +\infty} \frac{(\frac{c_1}{c})^{-\beta} + (\frac{c_2}{c})^{-\beta} - (\frac{c_1 c_2}{c^2})^{-\beta}}{x^{-\alpha}} = constant$$

To satisfy the power law requirement, we need:

$$s = \frac{\beta}{\alpha}$$

By definition, the lower bound for W^+ is parameter b, which could also be shown in the form of a and c:

$$b = a \cdot d \cdot c^s + a \cdot (1-d) \cdot c^s = a \cdot c^s$$

Additionally, as the mean of in-degree should be equal to that of out-degree, we have:

$$\begin{aligned} E(W^+) = E(W^-) &\Rightarrow a \cdot E({W^-}^s) = E({W^-}^s) \\ &\Rightarrow a \cdot \frac{\beta}{\beta - s} \cdot c^s = \frac{\beta}{\beta - 1} \cdot c \end{aligned}$$

Specifically in consideration of the case where s = 1, given that case in-degree and out-degree are supposed to be equal, thus identical W^+ and W^-, a should also be 1.

Notes:
`Samp_Dist_Corr`

The eigenvector calculation is done by the power iteration method and has no guarantee of convergence. The

#

$$s = \frac{\beta}{\alpha}$$
$$a\frac{\beta c^s}{\beta - s} = \frac{\beta c}{\beta - 1}$$
$$\Rightarrow a = 1 \text{ when } s = 1$$
$$a = \frac{\beta - s}{a^{s-1}(\beta - 1)}, \text{ otherwise}$$

para 1 a long long word awd mesf mawdf mfesfmsef msfe sergmmggrdmmm rdgdrgd drg.

para 2 a long long word awd mesf mawdf mfesfmsef msfe sergmmggrdmmm rdgdrgd drg.
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para4 a long long word awd mesf mawdf mfesfmsef msfe sergmmggrdmmm rdgdrgd drg.

Leslie Lamport was the initial developer of LaTeX, a document preparation system[1] based on TeX.
Let's see this webstie wiki page method description in doc

1. directed_configuration_model [source code]

```
directed_configuration_model(in_degree_sequence, out_degree_sequence, create
```

   Return a directed_random graph with the given degree sequences.

   The configuration model generates a random directed pseudograph (graph with parallel edges and self loops) by randomly assigning edges to match the given degree sequences.

   To remove parallel edges:

```
>>> D=nx.DiGraph(D)
```

   To remove self loops:

```
>>> D.remove_edges_from(D.selfloop_edges())
```

[2]
[3]
From Table 1, we could see that...

awff
algorithm aefaef

we use the algo awfd

References

[1] Leslie Lamport, *LaTeX: A Document Preparation System*. Addison Wesley, Massachusetts, 2nd Edition, `https://en.wikibooks.org/wiki/LaTeX/Hyperlinks` 1994.

[2] networkx package `https://networkx.github.io/documentation/networkx-1.11/` Released Jan 30, 2016

[3] directed_configuraiton_model `https://networkx.github.io/documentation/networkx-1.11/reference/generated/networkx.generators.degree_seq.directed_configuration_model.html?highlight=directed%20configuration%20model#networkx.generators.degree_seq.directed_configuration_model`

Table 1: Wikipedia vote network statistics

Feature name	Value
Nodes size	7115
Edges	103689
Expected degree	14.57
In-out degree correlation	0.317
Average clustering coefficient	0.1409
Number of triangles	608389
Diameter(longest shortest path)	7