Handling external data in MediaWiki

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About me

- Based in New Jersey
- My extensions: Page Forms, Cargo, etc.
- My company: WikiWorks
- My book: *Working with MediaWiki*
- My podcast: *Between the Brackets*

External data (lowercase "d")

- The amount of data outside a system always dwarfs the amount of data inside the system (even for Wikidata)
- It’s best not to have redundant data (best is "single source of truth")

Two basic approaches to handling external data

- 1) Import the data into the wiki, abandoning the outside system
  - Various solutions for this, including bots and the Data Transfer extension
- 2) Keep the data in the outside system and query it in the wiki
  - Standard extension for this: External Data
- Having the data in both systems, with some attempt at automated „syncing“, is rarely a good idea.

External Data (uppercase "D")

- A MediaWiki extension that lets you query and display outside data sources
- Created by me in 2009, improved and extended by many people
- Data retrieved can be either a single row of data (displayed via `#external_value`), or a table (displayed via `#for_external_table`, `#display_external_table` or `#format_external_table`)
- All functionality available via Scribunto/Lua as well

External Data: possible data sources

- Web pages (CSV, JSON, XML, plain text, HTML, INI, GFF)
- Web pages via SOAP (same format options)
- Local files (same format options)
- Databases
- LDAP servers
- Local executables

Examples pages

#get_web_data examples:

https://discoursedb.org/wiki/ED_get_web_data_examples

#get_program_data examples:

https://traditio.wiki/Традиция:Test/ED/exe

New features

In the last six months, the following features have been added (thanks to Alexander Mashin):

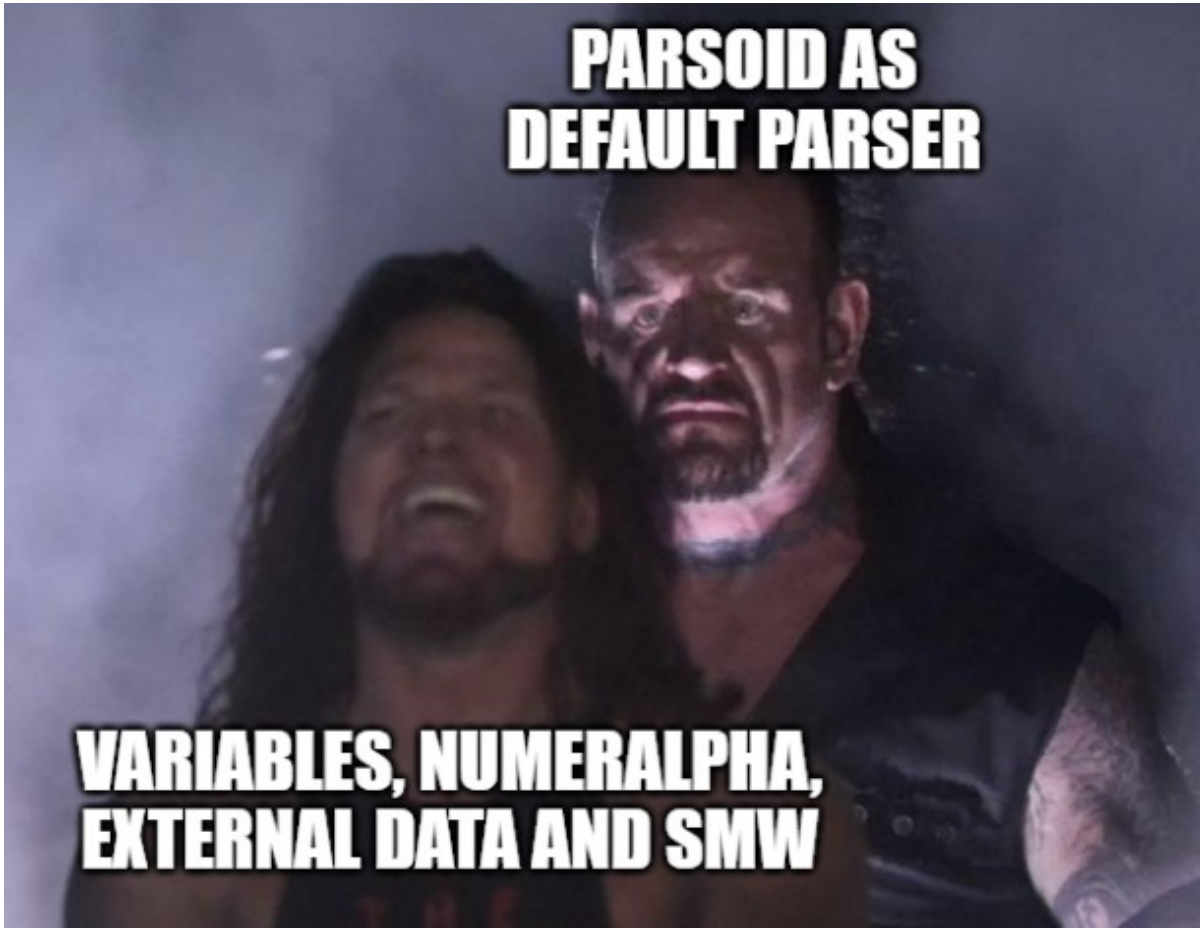
- `#get_program_data`
- `#get_external_data` (single catch-all function)
- Prepared SQL statements in `#get_db_data`
- INI format
- `#format_external_table` (uses Cargo to format results)
- ...and many others

External data in forms

- External data is also useful for setting possible values in forms.
- "values from external data=" – populates dropdowns, comboboxes, etc. with values retrieved by a call to `#get_web_data`, `#get_db_data`, etc.

Future complication: Parsoid

- Parsoid (a MediaWiki parser) parses different parts of a wiki page independently, not necessarily in order.
- Once Parsoid becomes the default parser, parser functions that rely on order (like `#get_web_data` + `#external_value`) will no longer necessarily work correctly.
- External Data is not the only extension with a problem.


PARSOID AS
DEFAULT PARSER
VARIABLES, NUMERALPHA,
EXTERNAL DATA AND SMW

What can be done?

- Variables and NumerAlpha may be screwed. :(
- For External Data, we need a way to retrieve and display data at the same time.

One option: new parameters

```
{{#get_web_data:
url=https://imdb-api.com/en/API/Title/IMDB_KEY/tt0055630
|format=json
|data=title=title,year=year,directors=directors,
stars=stars
|display template=Display IMDb film}}
```

...this would handle data retrieval *and* display!

"Display IMDb film" template

```
Info for ID '''...uh oh, what goes here?''':
* Name: {{{title}}}
* Year: {{{year}}}
* Director(s): {{{directors}}}
* Actors: {{{stars}}}
```

We probably need another parameter

```
{{#get_web_data:
url=https://imdb-api.com/en/API/Title/IMDB_KEY/
tt0055630
|format=json
|data=title=title,year=year,directors=directors,
stars=stars
|display template=Display IMDb film
|additional values=film ID=tt0055630}}
```

"Display IMDb film" template

```
Info for ID '''{{{film ID}}}''':
* Name: {{{title}}}
* Year: {{{year}}}
* Director(s): {{{directors}}}
* Actors: {{{stars}}}
```

Finally, a third new parameter

```
{{#get_web_data:
url=https://imdb-api.com/en/API/Title/IMDB_KEY/tt0055630
|format=json
|data=title=title,year=year,directors=directors,
stars=stars
|display format=table}}
```

Just as with `#format_external_table`, uses Cargo to display values.

Questions/comments/concerns