

How to Use the Q&S “Derive Genres” Functionality

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Summary of Q&S Derive Genres

- Uses whatever pre-existing Tags, if any, that exist for each book in your Q&S Library.
- If a book has zero Tags, then its Author may be used in lieu of Tags.
- Tag Rules are used to determine Genres by comparing the Rules to the Tags.
- Tag Rules are defined by you based upon your language, Genre naming scheme, types of books in your Q&S Library, and personal preferences.
- A working set of both Tag Rules and Author Rules are provided as examples.
- A Calibre custom column is required for this to function. The standard QuarantineAndScrub add-on database comes standard with a Custom Column of “genre”. However, Q&S configuration allows you to change which Custom Column is updated by the Q&S DG function. You may choose another Custom Column to suit your needs. The default in Q&S configuration is “#genre” because that Custom Column already exists in Q&S.

Tag Rules for Deriving Genres

- Tag Rules are defined in 2 different Q&S DG user-maintained tables: `_dg_genre_tag_rules_factual` and `_dg_genre_tag_rules_fiction`.

- 10 columns are predefined in each table, as shown on the right. Only 2 columns are “required” for a Tag Rule to function: `new_genre`, and `tag_keyword_1`. The remaining columns are optional, but necessary for further narrowing of to derive a very detailed `new_genre`.

id	new_genre	tag_keyword_1	tag_operator_1	tag_keyword_2	tag_operator_2	tag_keyword_3	tag_operator_3	tag_keyword_4	tag_operator_4	tag_keyword_5
1	Ficción:Ciencia	ciencia	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
2	Ficción:Ciencia	ficción:ciencia	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
3	Ficción:Ciencia	ciencia	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
4	Ficción:Ciencia	ficción:ciencia	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
5	Ficción:Ciencia-Novela	ficción:ciencia	AND	novela	AND	NONE	AND	NONE	AND	NONE
6	Ficción:Ciencia-Novela	ficción:ciencia-novela	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
7	Ficción:Histórico	ficción:histórico	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
8	Ficción:Histórico	histórico	AND	español	AND	NONE	AND	NONE	AND	NONE
9	Ficción:Intriga-Policiaco	ficción:intriga-policiaco	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
10	Ficción:Intriga-Policiaco	intriga	AND	policiaco	AND	NONE	AND	NONE	AND	NONE
11	Ficción:Action&Adventure	action	OR	adventure	OR	thriller	OR	suspense	OR	NONE
12	Ficción:Action&Adventure	fiction:action&adventure	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
13	Ficción:Action&Adventure	action	OR	adventure	NOT	*	NONE	NONE	NONE	NONE
14	Ficción:Anthology	anthology	OR	anthologies	OR	collection	OR	NONE	OR	NONE
15	Ficción:Anthology	fiction:anthology	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
16	Ficción:Autobiographical&Biographical	autobiographical	OR	biographical	OR	NONE	OR	NONE	OR	NONE
17	Ficción:Autobiographical&Biographical	fiction:autobiographical&biographical	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
18	Ficción:Children	children	NOT	juvenile	NOT	youth	NOT	ya	NOT	teenager
19	Ficción:Children	fiction:children	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
20	Ficción:Classics	classics	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
21	Ficción:Classics	fiction:classics	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

- There should be no Blanks.

Use “NONE” instead. The default of the table values is “NONE”, so that should be easy.

- Rules for Factual books are defined in table `_dg_genre_tag_rules_factual`, and rules for Non-Factual are defined in table `_dg_genre_tag_rules_fiction`.
- Each Rule is a Row in the Tag Rule tables, and will derive a Genre from a book's Tags if the conditions (if any) in the remaining 9 columns are satisfied.
- Tag Rule Keywords are matched to Tags via the logic of "is the Keyword equal to the Tag?" Direct equality matters. Werewolf is not equal to Werewolves.
- Fiction (i.e., Not Factual) books do not need any `tag_keyword` identifying them as "Fiction". If a book is Not Factual, then by default it is either Fiction or Poetry. Poetry (non-Prose) is handled just like Fiction.
- Factual (i.e. Non-Fiction and Non-Poetry) rules must have a "Non-Fiction Keyword" in `tag_keyword_1`. Those "Non-Fiction Keywords" also exist in Q&S DG table `_dg_nf_language_keywords` and can be tailored to your personal language and tastes. A fully functional set comes with Q&S DG. Refer to the images below. You may safely delete the rows that you will never personally use as a Real Tag within your Q&S library.

Q&S Derive Genres From Tags & Authors

- These nf_keywords are used by Q&S DG to categorize each book as Factual or Not Factual. That distinction is critical when selecting between the Author Rule fiction_genre and factual_genre. Delete the nf_keywords that you will never use, as doing so will speed processing.
- To specify a Factual Tag Rule, update Q&S DG table _dg_genre_tag_rules_factual. An nf_keyword MUST be in that table in tag_keyword_1. That same keyword must also be in a Tag in every book that is Factual and for which you want to derive a genre.

Table: `_dg_nf_language_keywords`

	id	nf_keyword
	Filter	Filter
1	56	factual
2	57	noficció
3	58	noficcion
4	59	sachbüch
5	60	não-ficção
6	61	tényleges
7	62	staðreyndir
8	63	fíorasach
9	64	gerçek
10	65	dejanska
11	66	factuel
12	67	fakta
13	68	faktaj
14	69	faktik
15	70	faktiki
16	71	faktiline
17	72	faktinis
18	73	faktisks
19	74	faktual
20	75	faktuelle
21	76	faktuzny

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Author Rules for Deriving Genre

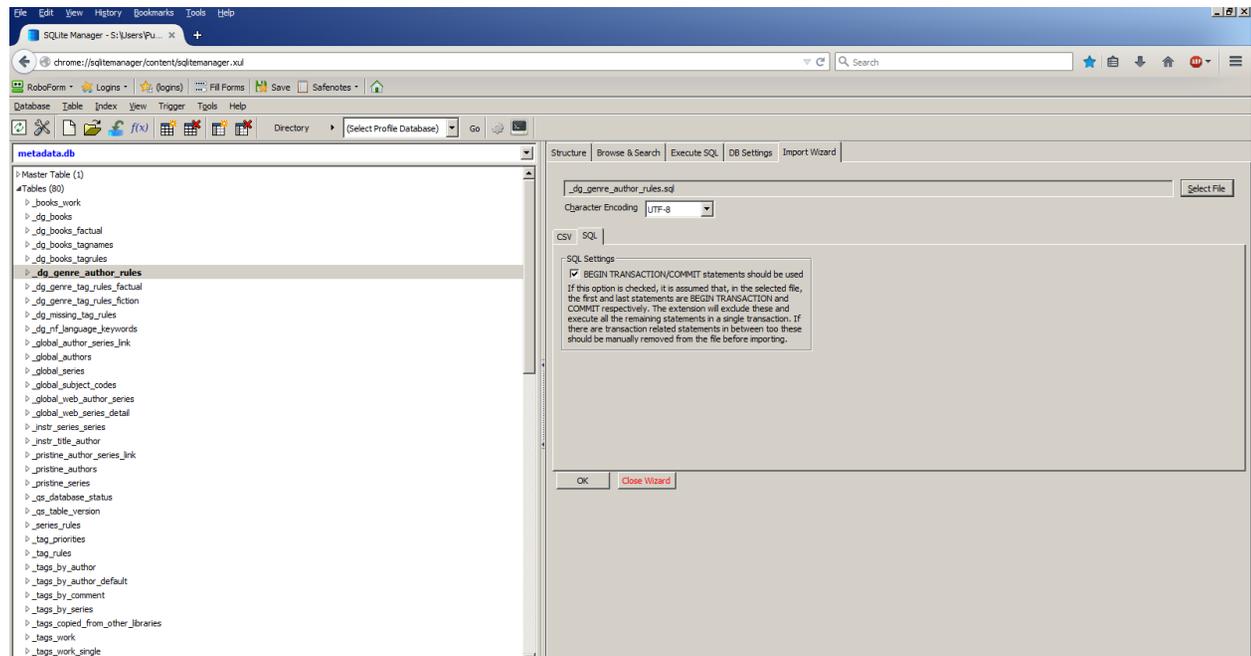
- You do not have to use Author Rules unless you wish.
- Author Rules are only searched if no Tag Rule were found for a particular book. Tag Rules take priority over Author Rules. Of course, Tag Rules require Tags, so any book with zero (or meaningless) Tags will by default have to try to use Author Rules.
- It is totally optional as far as Q&S DG is concerned, but if you wish to mass-edit your Tags for

Database Structure Browse Data Edit Pragmas Execute SQL				
Table: <input type="text" value="_dg_genre_author_rules"/>				
	id	author	fiction_genre	factual_genre
	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
1	1	a. grove day	NONE	FACTUAL:BIOGRAPHY&AUTOBIOGRAPHY
2	2	a. lee martinez	Fiction:Fantasy	NONE
3	3	a. manette ansay	Fiction:Romance-Historical	NONE
4	4	a. meredith walters	Fiction:Romance	NONE
5	5	a. michael matin	Fiction:Classics	NONE
6	6	a. scott berg	NONE	FACTUAL:BIOGRAPHY&AUTOBIOGRAPHY
7	7	a. warneke	Fiction:Romance	NONE
8	8	a.a. bell	Fiction:Fantasy	NONE
9	9	a.c. crispin	Fiction:Science&Fantasy	NONE
10	10	a.c. dillon	Fiction:Suspense&Thriller	NONE
11	11	a.c. mason	Fiction:Horror	NONE
12	12	a.c. warneke	Fiction:Romance	NONE
13	13	a.d. miller	Fiction:Mysteries&Detectives	NONE
14	14	a.d. smith iii	Fiction:Fantasy	NONE
15	15	a.e. murphy	Fiction:Humor	NONE
16	16	a.f. norman	NONE	FACTUAL:HISTORY-BARBARIANS
17	17	a.f.n. clarke	Fiction:Action&Adventure	NONE
18	18	a.g. henley	Fiction:Science&Fantasy	NONE
19	19	a.g. riddle	Fiction:Science	NONE
20	20	a.h. merrills	NONE	FACTUAL:HISTORY-BARBARIANS

Q&S Derive Genres From Tags & Authors

any reason, by far the most efficient manner in Calibre is the Category Editor for Tags. The menu path is: “Alter Tag Browser (lower left corner) > Manage Authors, Tags, etc. > Manage Tags”. This is a powerful and easy-to-use Tag editor.

- Optionally too, Authors may be managed by the Category Editor for Authors.
- A SQLite sql file with over 10,000 genre author rules (as shown above) is attached to the Q&S Original Post at <http://www.mobilerread.com/forums/showthread.php?p=2940048#post2940048> .
- If you wish, you may use a SQL Database Manager such as shown to the right to import the SQL file (after it is unzipped) into your Q&S library metadata.db database. The SQL file will add the 10,000 genre author rules to table `_dg_genre_author_rules` automatically. You may then edit their default Fiction and Factual genres as you wish, as well as adding new authors to that table.



All Available Boolean Logic Equations for Tag Rules

- The following Table of Boolean Equations has been implemented. Your Tag Rules are limited to these choices.
- Important: The Operator NOT may never appear to the LEFT of either AND or OR in the Tag Rules. Once you use a NOT, only more NOTs (or NONES) may be used to its right side.

	A	B	C	D	E	F	G	H	I	J	K
1	Boolean Operator Pattern	Logic Executed With Tags. Outcome Must Be True For Rule To Be Used.	KEYWORD1	OP1	KEYWORD2	OP2	KEYWORD3	OP3	KEYWORD4	OP4	KEYWORD5
2	(no operators at all)	x	x								
3	AND	x and y	x	and	y						
4	AND,AND	x and y and z	x	and	y	and	z				
5	AND,AND,AND	x and y and z and a	x	and	y	and	z	and	a		
6	AND,AND,AND,AND	x and y and z and a and b	x	and	y	and	z	and	a	and	b
7	AND,AND,AND,NOT	x and y and z and a and (not b)	x	and	y	and	z	and	a	not	b
8	AND,AND,AND,OR	x and y and z and (a or b)	x	and	y	and	z	and	a	or	b
9	AND,AND,NOT	(x and y) and z and (not a)	x	and	y	and	z	not	a		
10	AND,AND,NOT,NOT	x and y and z and (not a) and (not b)	x	and	y	and	z	not	a	not	b
11	AND,AND,OR	x and y and (z or a)	x	and	y	and	z	or	a		
12	AND,AND,OR,AND	x and y and (z or a) and b	x	and	y	and	z	or	a	and	b
13	AND,AND,OR,NOT	x and y and (z or a) and (not b)	x	and	y	and	z	or	a	not	b
14	AND,AND,OR,OR	x and y a z or a or b	x	and	y	and	z	or	a	or	b
15	AND,NOT	x and y and (not z)	x	and	y	not	z				
16	AND,NOT,NOT	x and y and (not z) and (not a)	x	and	y	not	z	not	a		
17	AND,NOT,NOT,NOT	x and y and (not z) and (not a) and (not b)	x	and	y	not	z	not	a	not	b
18	AND,OR	x and (y or z)	x	and	y	or	z				
19	AND,OR,AND	x and (y or z) and a	x	and	y	or	z	and	a		
20	AND,OR,AND,AND	x and (y or z) and a and b	x	and	y	or	z	and	a	and	b
21	AND,OR,AND,NOT	x and (y or z) and a and (not b)	x	and	y	or	z	and	a	not	b
22	AND,OR,AND,OR	x and (y or z) and (a or b)	x	and	y	or	z	and	a	or	b
23	AND,OR,NOT	x and (y or z) and (not a)	x	and	y	or	z	not	a		
24	AND,OR,NOT,NOT	x and (y or z) and (not a) and (not b)	x	and	y	or	z	not	a	not	b
25	AND,OR,OR	x and ((y or z) or a)	x	and	y	or	z	or	a		
26	AND,OR,OR,AND	x and ((y or z) or a) and b	x	and	y	or	z	or	a	and	b
27	AND,OR,OR,NOT	x and ((y or z) or a) and (not b)	x	and	y	or	z	or	a	not	b
28	AND,OR,OR,OR	x and (((y or z) or a) or b)	x	and	y	or	z	or	a	or	b
29	NOT	x and (not y)	x	not	y						
30	NOT,NOT	x and (not y) and (not z)	x	not	y	not	z				
31	NOT,NOT,NOT	x and (not y) and (not z) and (not a)	x	not	y	not	z	not	a		
32	NOT,NOT,NOT,NOT	x and (not y) and (not z) and (not a) and (not b)	x	not	y	not	z	not	a	not	b
33	OR	x or y	x	or	y						
34	OR,AND	(x or y) and z	x	or	y	and	z				
35	OR,AND,AND	(x or y) and z and a	x	or	y	and	z	and	a		
36	OR,AND,AND,AND	(x or y) and z and a and b	x	or	y	and	z	and	a	and	b
37	OR,AND,AND,NOT	(x or y) and z and a and (not b)	x	or	y	and	z	and	a	not	b
38	OR,AND,AND,OR	(x or y) and z and (a or b)	x	or	y	and	z	and	a	or	b

(continued on the next page)

Q&S Derive Genres From Tags & Authors

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- These equations reflect the Operator Precedence of: AND; OR; and last NOT.
- For a Tag Rule to “pass” a test for applicability for a particular book, its Tags must comply with the logic within each Tag Rule.
- Multiple Tag Rules may “pass” this test, and become candidates for bestowing their Genres

on the respective book. In the case of multiple Candidates, the Tag Rule with the longest Genre wins. If they were all the same length, then the first one found (based on imported spreadsheet row sequence) would “win”, and the book

	A	B	C	D	E	F	G	H	I	J	K
33	OR	x or y	x	or	y						
34	OR,AND	(x or y) and z	x	or	y	and	z				
35	OR,AND,AND	(x or y) and z and a	x	or	y	and	z	and	a		
36	OR,AND,AND,AND	(x or y) and z and a and b	x	or	y	and	z	and	a	and	b
37	OR,AND,AND,NOT	(x or y) and z and a and (not b)	x	or	y	and	z	and	a	and	(not b)
38	OR,AND,AND,OR	(x or y) and z and (a or b)	x	or	y	and	z	and	(a or b)		
39	OR,AND,NOT	(x or y) and z and (not a)	x	or	y	and	z	and	(not a)		
40	OR,AND,NOT,NOT	(x or y) and z and (not a) and (not b)	x	or	y	and	z	and	(not a)	and	(not b)
41	OR,AND,OR	(x or y) and (z or a)	x	or	y	and	(z or a)				
42	OR,AND,OR,AND	(x or y) and (z or a) and b	x	or	y	and	(z or a)	and	b		
43	OR,AND,OR,NOT	(x or y) and (z or a) and (not b)	x	or	y	and	(z or a)	and	(not b)		
44	OR,AND,OR,OR	(x or y) and ((z or a) or b)	x	or	y	and	((z or a) or b)				
45	OR,NOT	(x or y) and (not z)	x	or	y	and	(not z)				
46	OR,NOT,NOT	(x or y) and (not z) and (not a)	x	or	y	and	(not z)	and	(not a)		
47	OR,NOT,NOT,NOT	(x or y) and (not z) and (not a) and (not b)	x	or	y	and	(not z)	and	(not a)	and	(not b)
48	OR,OR	(x or y) or z	x	or	y	or	z				
49	OR,OR,AND	((x or y) or z) and a	x	or	y	or	z	and	a		
50	OR,OR,AND,AND	((x or y) or z) and a and b	x	or	y	or	z	and	a	and	b
51	OR,OR,AND,NOT	((x or y) or z) and a and (not b)	x	or	y	or	z	and	a	and	(not b)
52	OR,OR,AND,OR	((x or y) or z) and (a or b)	x	or	y	or	z	and	(a or b)		
53	OR,OR,NOT	((x or y) or z) and (not a)	x	or	y	or	z	and	(not a)		
54	OR,OR,NOT,NOT	((x or y) or z) and (not a) and (not b)	x	or	y	or	z	and	(not a)	and	(not b)
55	OR,OR,OR	((x or y) or z) or a	x	or	y	or	z	or	a		
56	OR,OR,OR,AND	((((x or y) or z) or a) and b)	x	or	y	or	z	or	a	and	b
57	OR,OR,OR,NOT	((((x or y) or z) or a) and (not b))	x	or	y	or	z	or	a	and	(not b)
58	OR,OR,OR,OR	((((x or y) or z) or a) or b)	x	or	y	or	z	or	a	or	b
59											

would be given that Rule’s Genre. The concept is that the longer a Genre, the more detailed and specific it would be. Fiction:Romance-Paranormal is longer than Fiction:Romance, and is also more specific.

Special Wildcard Symbol in Tag Rules

- Tag Rules have a “wildcard”, which is the Asterisk: *
- The Asterisk must always be preceded by the NOT Operator. The plugin will overwrite any Operator other than NOT to the immediate left of the Asterisk. Obviously, tag_keyword_1 can never be the wildcard because there is no Operator to its left.
- The Asterisk always means “and nothing else”. That means that the Tag Keywords to the LEFT of the “NOT * ” wildcard operator/keyword combination become the ONLY Tags that a book may have for that specific Tag Rule to “pass” the logic. Once you use the Wildcard, no other Operators or Keywords (except NONEs) may be used in that particular Tag Rule for the remainder (to the RIGHT) of that Wildcard within that specific Tag Rule.

Q&S Derive Genres From Tags & Authors

Example Annotated Results of Plugin Job

marked:genre_updated

Tags	Genre
1 abc1, abc2, abc3, abc4, abc5, abc6, abc7, abc8, abc9, abc10, abc11	Example:YouCanDoAlmostAnythingWithTagRules
2 abc1, abc2, abc3, abc4, abc5, abc6, abc7, abc8, abc9, abc10, abc11	Example:YouCanDoAlmostAnythingWithTagRules
3 Antiques, Factual	Factual:Antiques&Collectibles
4 Cooking, Factual	Factual:Cooking-General
5 Cooking, Factual	Factual:Cooking-General
6 Factual	Factual:testing
7 Factual	Factual:testing
8 Action, Adventure	Fiction:Action&Adventure
9 Classics	Fiction:Classics
10 Classics	Fiction:Classics
11 Comics	Fiction:Comics&GraphicNovels
12 Dystopia	Fiction:Dystopian&Apocalyptic
13 Fantasy, Paranormal	Fiction:Fantasy-Paranormal
14 Fantasy, Steampunk	Fiction:Fantasy-Steampunk
15 Steampunk	Fiction:Fantasy-Steampunk
16 Fantasy, Urban	Fiction:Fantasy-Urban
17 Default	Fiction:General
18 Default	Fiction:General
19 Default	Fiction:General
20 Default	Fiction:General
21 Default	Fiction:General
22 Default	Fiction:General
23 Default	Fiction:General
24 Default	Fiction:General
25 Default	Fiction:General
26 Default	Fiction:General
27 Default	Fiction:General
28 Default	Fiction:General
29 Default	Fiction:General
30 Default	Fiction:General
31 Horror	Fiction:Horror
32 Horror	Fiction:Horror
33 Horror	Fiction:Horror
34 Humor	Fiction:Humor
35 Jewish	Fiction:Jewish
36 Politics	Fiction:Political
37 Romance	Fiction:Romance

author	fiction_genre	factual_genre
Zedart Hodges	Fiction:Testing	FACTUAL:BIOGR
Zena Bernstein	Fiction:Testing	Factual:testing

new_genre	tag_keyword_1	tag_operator_1
Example:YouCanDoAlmostAnythingWithTagRules	abc1	AND
Fiction:General	Default	

Annotations:

- Tag Rules:** Lines 1-2, 3-5, 12-16, 34-37
- Author Rules (factual_genre):** Lines 6-7
- Tag Rules:** Lines 8-11, 13-16, 31-33
- Default Tag Rule For Fiction:** Points to the 'Default' value in the 'tag_operator_1' column of the table below.

Example Jobs Results

```
Quarantine And Scrub
Starting job: Quarantine And Scrub
Q&S: Deriving Genres for 22 Book(s)
S:/Users/Public/Public eBooks/QuarantineAndScrub/metadata.db
SQLite version is: 3008004
PRAGMA main.locking_mode=EXCLUSIVE;
-----
Q&S Derive Genres is controlled by 4 DG tables within Q&S that are User-Maintained:
.....      _dg_nf_language_keywords
.....      _dg_genre_tag_rules_factual
.....      _dg_genre_tag_rules_fiction
.....      _dg_genre_author_rules

Q&S DG uses Real Tags, not Work Tags, so finalize Real Tags prior to execution.

Q&S DG adds missing Tag Rule Combinations to DG table _dg_missing_tag_rules.

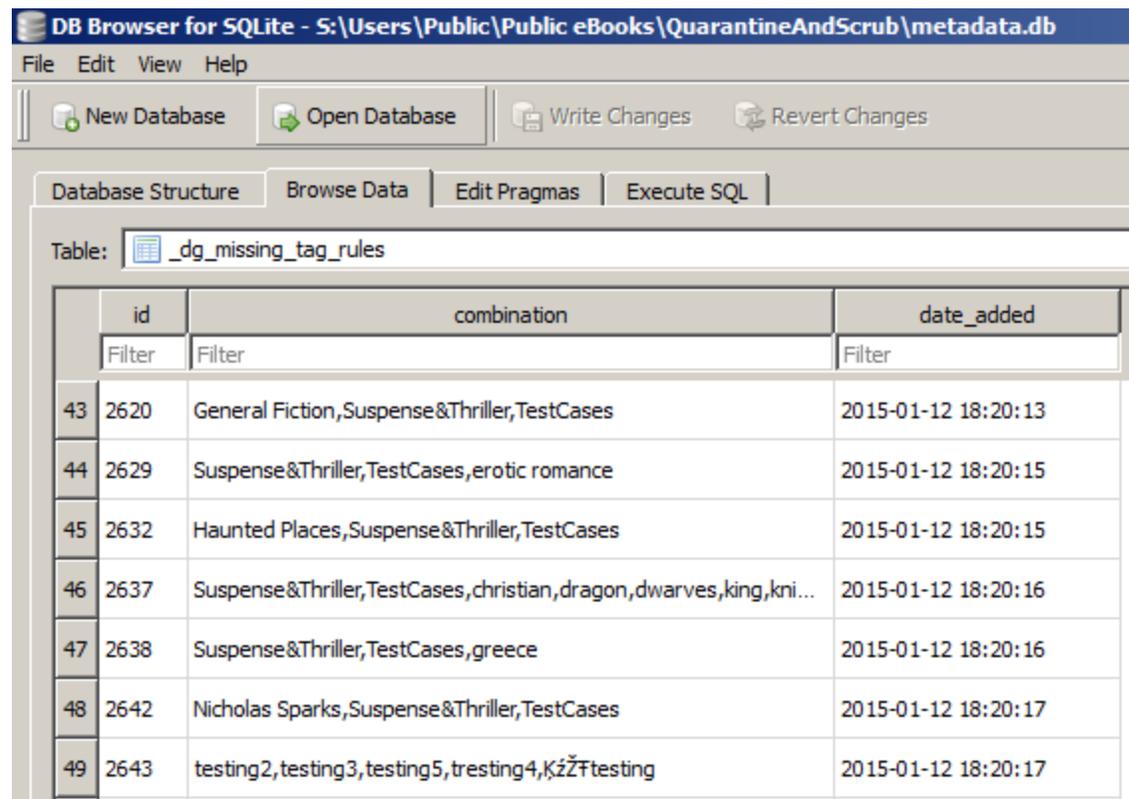
You should use table _dg_missing_tag_rules to help you create new Tag Rules.

You should delete rows in table _dg_missing_tag_rules that no longer are useful to you.
-----
Q&S Configured Custom Column #Name to be used is: #genre
-----
-----
-----
Number of Selected Books to Process:                22
Number of Rules for Fiction/Poetry Processed:       129
Number of Rules for Factual Processed:              111
Number of Rules for Authors Processed:             10278
Number of Multi-Language Factual Keywords:         50
Number of Books for Which Tags Were Gathered:      22
Number of Factual Books Identified:                 0
Number of Non-Factual Books Identified:            22
Number of New Genres Derived from Rules:           16
Number of Books With No Applicable Rules:          6
Number of Missing Tag Rules in _dg_missing_tag_rules: 94
-----
-----
Genre Derivation ended normally
```



Tag Combinations Missing Tag Rules

This table is automatically updated whenever a book fails to find a match for any Tag Rules. Its purpose is to allow you to easily determine what new Tag Rules you need to add to the appropriate Factual or Fiction Tag Rules tables. After you add the new Tag Rules, you should delete the entries within this table.



The screenshot shows the DB Browser for SQLite interface. The title bar indicates the database path: S:\Users\Public\Public eBooks\QuarantineAndScrub\metadata.db. The interface includes a menu bar (File, Edit, View, Help) and a toolbar with buttons for New Database, Open Database, Write Changes, and Revert Changes. Below the toolbar are tabs for Database Structure, Browse Data, Edit Pragmas, and Execute SQL. The 'Browse Data' tab is active, showing a table named '_dg_missing_tag_rules'. The table has three columns: 'id', 'combination', and 'date_added'. The data rows are as follows:

	id	combination	date_added
	Filter	Filter	Filter
43	2620	General Fiction,Suspense&Thriller,TestCases	2015-01-12 18:20:13
44	2629	Suspense&Thriller,TestCases,erotic romance	2015-01-12 18:20:15
45	2632	Haunted Places,Suspense&Thriller,TestCases	2015-01-12 18:20:15
46	2637	Suspense&Thriller,TestCases,christian,dragon,dwarves,king,kni...	2015-01-12 18:20:16
47	2638	Suspense&Thriller,TestCases,greece	2015-01-12 18:20:16
48	2642	Nicholas Sparks,Suspense&Thriller,TestCases	2015-01-12 18:20:17
49	2643	testing2,testing3,testing5,tresting4,KžžFtesting	2015-01-12 18:20:17

Remember that Q&S DG uses Real Tags, not Work Tags. Be sure to always use the Q&S “Copy Work Tags to Real Tags” prior to running Q&S DG.