PiDs

Q1 **User perception of persistent identifiers within open scholarly infrastructure**
Introduction
My name is [Dr George Macgregor](#) and I am based at the [University of Strathclyde](#), working with colleagues in [iSchool at the Department of Computer & Information Sciences](#) and the institution's Information Service Directorate. You are being invited to participate in this research because you are often engaged in research dissemination via scholarly papers and may have used a repository to make some of your scholarly work available. Participation entails completion of a questionnaire.

 What is the purpose of this research?
 This part of the research is concerned with the persistent identification of scholarly resources on the web. Increasingly, scholarly resources – papers, datasets, software – are referenced or linked using persistent links known as PiDs (persistent identifiers). There are many reasons why PiDs might be useful but one of the principal ones is that they can mitigate the issue of broken links, i.e. 'link rot'. The aim of the research is to better understand user perceptions and understanding of PiDs thereby enabling a better community response to user training, etc.

 Do you have to take part?
 It is entirely your decision whether you participate in this research or not. Completion of the questionnaire is entirely voluntary and there are no consequences for refusing or withdrawing participation.

 What will you do in the research?
 As noted above, the research will involve the completion of a questionnaire. The questionnaire will contain a series of questions seeking responses on scales or multi-choice questions. Some visual examples (e.g. screen shots) will form the basis of some questions and you will be asked your opinion in these instances. There will be no mandatory questions and completion time of the questionnaire is unlikely to exceed 15 mins.

 Why have you been invited to take part?
 You have been invited to participate because you are active in research dissemination or have a job role that entails the publication or dissemination of research outputs, whether these be academic papers, research datasets and so forth and whether these be made available through publisher websites or repositories. We interested in respondents from all academic backgrounds.

If your research background is within the areas of scholarly communication, open research or

repository technologies, we kindly request that you **do not** participate.

What information is being collected in the project?
The information being collected relates to your perceptions and understanding of PIDs. Some basic demographic information will be requested in the questionnaire (i.e. your discipline background and the country in which you are based) but **no personal information will be requested** or is indeed necessary for this study. Data therefore remain **completely anonymous**. Even so, the information gathered will be securely stored and accessed until such time it is prepared for wider dissemination (e.g. to accompany a related publication). If you still wish your data to be withdrawn, please make a note of the date/time you submitted your questionnaire and communicate this by email to george.macgregor@strath.ac.uk.

What happens next?
If you are happy to participate, please initiate the questionnaire by consenting to your involvement and **clicking the button** below.

The results of this research will be published in the academic literature, alongside an appropriately prepared and anonymized dataset.

If you would like to learn more about this research, please feel free to contact George Macgregor at george.macgregor@strath.ac.uk

This research was granted ethical approval by the University of Strathclyde Department of Computer & Information Sciences Ethics Committee. If you have any questions/concerns, during or after the research, or wish to contact an independent person to whom any questions may be directed or further information may be sought from, please contact: Secretary to the University Ethics Committee at ethics@cis.strath.ac.uk

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Q41 Please indicate that you have read and understood the participant details provided and that you consent to participating by clicking the checkbox below.

○ I have read and understood the participant information. (1)

Page Break ——————————————————————————————————————

Q2
We begin by seeking some information about your experience using computers.

Please indicate your level of agreement with the following statements about your use of computers

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I can always manage to solve difficult computer problems if I try hard enough. (1)	◯	◯	◯	◯	◯	◯	◯
If my computer is 'acting-up', I can find a way to get what I want. (2)	◯	◯	◯	◯	◯	◯	◯
It is easy for me to accomplish my computer goals. (3)	◯	◯	◯	◯	◯	◯	◯
I am confident that I could deal efficiently with unexpected computer events. (4)	◯	◯	◯	◯	◯	◯	◯
I can solve most computer programs if I invest the necessary effort. (5)	◯	◯	◯	◯	◯	◯	◯
I can remain calm when facing computer difficulties because I can rely on my abilities. (6)	◯	◯	◯	◯	◯	◯	◯
When I am confronted with a computer problem, I can usually find several solutions. (7)	◯	◯	◯	◯	◯	◯	◯
I can usually handle whatever computer problem comes my way. (8)	◯	◯	◯	◯	◯	◯	◯
Failing to do something on the computer makes me try harder. (9)	◯	◯	◯	◯	◯	◯	◯

I am a self-reliant person when it comes to doing things on a computer. (10)	◯ Strongly disagree (1)	◯ Disagree (2)	◯ Somewhat disagree (3)	◯ Neither agree nor disagree (4)	◯ Somewhat agree (5)	◯ Agree (6)	◯ Strongly agree (7)
There are few things that I cannot do on a computer. (11)	◯ Strongly disagree (1)	◯ Disagree (2)	◯ Somewhat disagree (3)	◯ Neither agree nor disagree (4)	◯ Somewhat agree (5)	◯ Agree (6)	◯ Strongly agree (7)
I can persist and complete most any computer-related task (12)	◯ Strongly disagree (1)	◯ Disagree (2)	◯ Somewhat disagree (3)	◯ Neither agree nor disagree (4)	◯ Somewhat agree (5)	◯ Agree (6)	◯ Strongly agree (7)

Page Break

Q3
This research is interested in how academic users identify scholarly resources on the web, especially within a scholarly communications context. Identification of resources is frequently achieved through hyperlinking with a URL (often colloquially known as a 'web address') or some other similar alternative.

'Scholarly resources' typically include things such as academic papers or articles, datasets, software or grey literature, but can include people and places too. Scholarly resources are increasingly referenced or linked using persistent links known as persistent identifiers (sometimes abbreviated as 'PIDs').

The first few questions will include some screen snippets and ask you to identify the persistent identifiers displayed within the screen snippets.

Page Break

X→

Q4
Above is a screen snippet of an article published by a well-known journal title.

After examining the screen snippet, please indicate below to which (if any) the highlighted persistent identifiers refer. (tick as many or few as you think is necessary)

- ☐ Publications (on publisher website or platform) (1)

- ☐ Publications (on repository) (2)

- ☐ Research data or open data (3)

- ☐ Research grants (4)

- ☐ Organizations (5)

- ☐ Software (6)

- ☐ People (e.g. authors, editors, Pis, etc.) (7)

- ☐ Research instruments (8)

- ☐ Research equipment or facilities (9)

- ☐ Projects or research activities (10)

- ☐ Audiovisual resources (11)

- ☐ Metadata (bibliographic data) (12)

- ☐ None (13)

Page Break

X→

Q5

 Above is a screen snippet of an article made available via an open repository.

After examining the screen snippet, please indicate below to which (if any) the highlighted persistent identifiers refer. (tick as many or few as you think is necessary)

- [ ] Publications (on publisher website or platform) (1)

- [ ] Publications (on repository) (2)

- [ ] Research data or open data (3)

- [ ] Research grants (4)

- [ ] Organizations (5)

- [ ] Software (6)

- [ ] People (e.g. authors, editors, Pis, etc.) (7)

- [ ] Research instruments (8)

- [ ] Research equipment or facilities (9)

- [ ] Projects or research activities (10)

- [ ] Audiovisual resources (11)

- [ ] Metadata (bibliographic data) (12)

- [ ] None (13)

Page Break

X→

Q6

Above is a screen snippet of another article published in a well-known journal title.

Once again, please indicate below to which (if any) the persistent identifiers refer. (tick as many or few as you think is necessary)

☐ Publications (on publisher website or platform) (1)

☐ Publications (on repository) (2)

☐ Research data or open data (3)

☐ Research grants (4)

☐ Organizations (5)

☐ Software (6)

☐ People (e.g. authors, editors, Pis, etc.) (7)

☐ Research instruments (8)

☐ Research equipment or facilities (9)

☐ Projects or research activities (10)

☐ Audiovisual resources (11)

☐ Metadata (bibliographic data) (12)

☐ None (13)

Page Break

X→

Q7

 Finally, above we have a screen snippet of an article deposited in an open repository.

Please indicate below to which (if any) the persistent identifiers refer. (tick as many or few as you think is necessary)

☐   Publications (on publisher website or platform) (1)

☐   Publications (on repository) (2)

☐   Research data or open data (3)

☐   Research grants (4)

☐   Organizations (5)

☐   Software (6)

☐   People (e.g. authors, editors, Pis, etc.) (7)

☐   Research instruments (8)

☐   Research equipment or facilities (9)

☐   Projects or research activities (10)

☐   Audiovisual resources (11)

☐   Metadata (bibliographic data) (12)

☐   None (13)

End of Block: Block 2

Start of Block: Block 3

Q8 We are interested in your familiarity with some of the persistent identifier types you may have encountered or used in your academic work. Many of these identifier types follow a particular syntax and can identify a wide variety of resources.

Some examples of typical identifier types are presented over the next few pages of the questionnaire. Please continue.

Q9
To what extent is this a type of identifier that you recognize?

Type 1: https://doi.org/10.1080/01639625.2020.1837692

○ Do not recognize (1)

○ Unsure (2)

○ Somewhat recognize (3)

○ Strongly recognize (4)

Display This Question:
    If Q9 = 3
    Or Q9 = 4

X→

Q10

The type of identifier above is one I most associate with identifying:

(tick as many or few as you think is necessary)

☐ Publications (on a publisher website or platform) (1)

☐ Publications (on a repository) (2)

☐ Research data or open data (3)

☐ Research grants (4)

☐ Organizations (5)

☐ Software (6)

☐ People (e.g. authors, editors, Pis, etc.) (7)

☐ Research instruments (8)

☐ Research equipment or facilities (9)

☐ Projects or research activities (10)

☐ Audiovisual resources (11)

☐ Metadata (bibliographic data) (12)

☐ Other – please specify (13) _____

Page Break _____

Q11
To what extent is this a type of identifier that you recognize?

Type 2: https://hdl.handle.net/1842/25497

○ Do not recognize (1)

○ Unsure (2)

○ Somewhat recognize (3)

○ Strongly recognize (4)

Display This Question:
    If Q11 = 3
    Or Q11 = 4

X→

Q12
The type of identifier above is one I most associate with identifying:

(tick as many or few – or none! - as you think is necessary)

- [ ] Publications (on a publisher website or platform) (1)

- [ ] Publications (on a repository) (2)

- [ ] Research data or open data (3)

- [ ] Research grants (4)

- [ ] Organizations (5)

- [ ] Software (6)

- [ ] People (e.g. authors, editors, Pis, etc.) (7)

- [ ] Research instruments (8)

- [ ] Research equipment or facilities (9)

- [ ] Projects or research activities (10)

- [ ] Audiovisual resources (11)

- [ ] Metadata (bibliographic data) (12)

- [ ] Other – please specify (13) _____

Page Break

Q13
To what extent is this a type of identifier that you recognize?

Type 3: https://orcid.org/0000-0003-1275-7054

○ Do not recognize (1)

○ Unsure (2)

○ Somewhat recognize (3)

○ Strongly recognize (4)

Display This Question:

    If Q13 = 3

    Or Q13 = 4

X→

Q14
The type of identifier above is one I most associate with identifying:

(tick as many or few – or none! - as you think is necessary)

☐   Publications (on a publisher website or platform) (1)

☐   Publications (on a repository) (2)

☐   Research data or open data (3)

☐   Research grants (4)

☐   Organizations (5)

☐   Software (6)

☐   People (e.g. authors, editors, Pis, etc.) (7)

☐   Research instruments (8)

☐   Research equipment or facilities (9)

☐   Projects or research activities (10)

☐   Audiovisual resources (11)

☐   Metadata (bibliographic data) (12)

☐   Other – please specify (13) _____

Page Break _____

Q15
To what extent is this a type of identifier that you recognize?

Type 4: https://ror.org/02qm2nb52

○ Do not recognize (1)

○ Unsure (2)

○ Somewhat recognize (3)

○ Strongly recognize (4)

Display This Question:
   If Q15 = 3
   Or Q15 = 4

X→

Q16
The type of identifier above is one I most associate with identifying:

(tick as many or few – or none! - as you think is necessary)

☐ Publications (on a publisher website or platform) (1)

☐ Publications (on a repository) (2)

☐ Research data or open data (3)

☐ Research grants (4)

☐ Organizations (5)

☐ Software (6)

☐ People (e.g. authors, editors, Pis, etc.) (7)

☐ Research instruments (8)

☐ Research equipment or facilities (9)

☐ Projects or research activities (10)

☐ Audiovisual resources (11)

☐ Metadata (bibliographic data) (12)

☐ Other – please specify (13) _____

Page Break

Q17
To what extent is this a type of identifier that you recognize?

Type 5: https://isni.org/isni/000000049576056

○ Do not recognize (1)

○ Unsure (2)

○ Somewhat recognize (3)

○ Strongly recognize (4)

X→

Q18

The type of identifier above is one I most associate with identifying:

(tick as many or few – or none! - as you think is necessary)

- ☐ Publications (on a publisher website or platform) (1)

- ☐ Publications (on a repository) (2)

- ☐ Research data or open data (3)

- ☐ Research grants (4)

- ☐ Organizations (5)

- ☐ Software (6)

- ☐ People (e.g. authors, editors, Pis, etc.) (7)

- ☐ Research instruments (8)

- ☐ Research equipment or facilities (9)

- ☐ Projects or research activities (10)

- ☐ Audiovisual resources (11)

- ☐ Metadata (bibliographic data) (12)

- ☐ Other – please specify (13) _____

Page Break

Q19
And, finally for now, to what extent is this a type of identifier that you recognize?

Type 6: urn:nbn:se:uu:diva-160193

○ Do not recognize (1)

○ Unsure (2)

○ Somewhat recognize (3)

○ Strongly recognize (4)

X→

Q20

The type of identifier above is one I most associate with identifying:

(tick as many or few – or none! - as you think is necessary)

☐   Publications (on a publisher website or platform) (1)

☐   Publications (on a repository) (2)

☐   Research data or open data (3)

☐   Research grants (4)

☐   Organizations (5)

☐   Software (6)

☐   People (e.g. authors, editors, Pis, etc.) (7)

☐   Research instruments (8)

☐   Research equipment or facilities (9)

☐   Projects or research activities (10)

☐   Audiovisual resources (11)

☐   Metadata (bibliographic data) (12)

☐   Other – please specify (13) _____

End of Block: Block 3

Start of Block: Block 4

X→

Q21
Please indicate your judgement of the statement concept on the scale below. For example, the statement concept below is "Persistent identifiers within scholarly communication". The strength of your judgement of this statement depends upon where (between the two ends of the opposing scale) seem most characteristic of the concept you are judging.

Please do not try to remember if you judged similar items previously or worry about previous responses. Instead please make separate and independent judgements.

Persistent identifiers within scholarly communication are:

	1 (-4)	2 (-3)	3 (-2)	4 (-1)	5 (0)	6 (1)	7 (2)	8 (3)	9 (4)	
Bad	○	○	○	○	○	○	○	○	○	Good
Unimportant	○	○	○	○	○	○	○	○	○	Important
Complex	○	○	○	○	○	○	○	○	○	Simple
Unintuitive	○	○	○	○	○	○	○	○	○	Intuitive
Foolish	○	○	○	○	○	○	○	○	○	Wise
Unscientific	○	○	○	○	○	○	○	○	○	Scientific
Laborious	○	○	○	○	○	○	○	○	○	Effortless
Useless	○	○	○	○	○	○	○	○	○	Valuable
Unitelligible	○	○	○	○	○	○	○	○	○	Intelligible
Abstract	○	○	○	○	○	○	○	○	○	Concrete
Difficult	○	○	○	○	○	○	○	○	○	Easy
Negative	○	○	○	○	○	○	○	○	○	Postive
Unnecessary	○	○	○	○	○	○	○	○	○	Necessary

X→

Q22 Using persistent identifiers to refer to people is:

	1 (-4)	2 (-3)	3 (-2)	4 (-1)	5 (0)	6 (1)	7 (2)	8 (3)	9 (4)	
Bad	○	○	○	○	○	○	○	○	○	Good
Unimportant	○	○	○	○	○	○	○	○	○	Important
Complex	○	○	○	○	○	○	○	○	○	Simple
Unintuitive	○	○	○	○	○	○	○	○	○	Intuitive
Foolish	○	○	○	○	○	○	○	○	○	Wise
Unscientific	○	○	○	○	○	○	○	○	○	Scientific
Laborious	○	○	○	○	○	○	○	○	○	Effortless
Useless	○	○	○	○	○	○	○	○	○	Valuable
Unintelligible	○	○	○	○	○	○	○	○	○	Intelligible
Abstract	○	○	○	○	○	○	○	○	○	Concrete
Difficult	○	○	○	○	○	○	○	○	○	Easy
Negative	○	○	○	○	○	○	○	○	○	Positive
Unnecessary	○	○	○	○	○	○	○	○	○	Necessary

X→

Q23 **Using persistent identifiers to refer to places**:

	1 (-4)	2 (-3)	3 (-2)	4 (-1)	5 (0)	6 (1)	7 (2)	8 (3)	9 (4)	
Bad	○	○	○	○	○	○	○	○	○	Good
Unimportant	○	○	○	○	○	○	○	○	○	Important
Complex	○	○	○	○	○	○	○	○	○	Simple
Unintuitive	○	○	○	○	○	○	○	○	○	Intuitive
Foolish	○	○	○	○	○	○	○	○	○	Wise
Unscientific	○	○	○	○	○	○	○	○	○	Scientific
Laborious	○	○	○	○	○	○	○	○	○	Effortless
Useless	○	○	○	○	○	○	○	○	○	Valuable
Unintelligible	○	○	○	○	○	○	○	○	○	Intelligible
Abstract	○	○	○	○	○	○	○	○	○	Concrete
Difficult	○	○	○	○	○	○	○	○	○	Easy
Negative	○	○	○	○	○	○	○	○	○	Positive
Unnecessary	○	○	○	○	○	○	○	○	○	Necessary

Page Break

X→

Q24 'Things' can include academic papers on the Web, datasets, and so forth, but also research instruments or protocols, biological samples, equipment, research grants or projects.

Using persistent identifiers to refer to things:

	1 (-4)	2 (-3)	3 (-2)	4 (-1)	5 (0)	6 (1)	7 (2)	8 (3)	(9)	
Bad	○	○	○	○	○	○	○	○	○	Good
Unimportant	○	○	○	○	○	○	○	○	○	Important
Complex	○	○	○	○	○	○	○	○	○	Simple
Unintuitive	○	○	○	○	○	○	○	○	○	Intuitive
Foolish	○	○	○	○	○	○	○	○	○	Wise
Unscientific	○	○	○	○	○	○	○	○	○	Scientific
Laborious	○	○	○	○	○	○	○	○	○	Effortless
Useless	○	○	○	○	○	○	○	○	○	Valuable
Unintelligible	○	○	○	○	○	○	○	○	○	Intelligible
Abstract	○	○	○	○	○	○	○	○	○	Concrete
Difficult	○	○	○	○	○	○	○	○	○	Easy
Negative	○	○	○	○	○	○	○	○	○	Positive
Unnecessary	○	○	○	○	○	○	○	○	○	Necessary

End of Block: Block 4

Start of Block: Block 5

Q25 We are nearing the end of the questionnaire. In this final section we are interested in learning about how you currently use persistent identifiers.

Q26 **Using** persistent identifiers of any type within my scholarly work is something with which I am:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	
Unfamiliar	○	○	○	○	○	○	○	○	○	Familiar

Q27 The **purpose** of a persistent idenitifier is something about which I am:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	
Unknowledgable	○	○	○	○	○	○	○	○	○	Knowledgable

Q28
I consider the purpose of using persistent identifiers to include:

(mark all - or none - that you consider to apply)

☐ To protect against links (URLs or 'web addresses') that may become broken over time (i.e. 'link rot') (1)

☐ To ensure the persistent and unambiguous citation of scholarly objects on the web (2)

☐ To promote interlinking between scholarly objects on the web (3)

☐ To promote the findability of my scholarly work (4)

☐ To ensure long-term maintenance and integrity of the published scholarly record on the web (e.g. for the purposes of verification, reanalysis, study reproduction, replication, and so forth) (5)

☐ To enrich global bibliographic data about scholarly objects on the web and beyond (6)

☐ To support more accurate counting and tracking of citations of my work and the work of others (7)

☐ To assist in the tracking of the alternative impact of scholarly objects (8)

X→

Q29 Persistent identifiers are something that scholars may knowingly **create** and **reuse** as a part of engaging in research.

Thinking about the past **4 years**, have you created a persistent identifier for any of the following?

☐ An accepted manuscript or preprint made available in an open repository (e.g. subject repository, institutional repository, preprint server, etc.) (1)

☐ Research data or open data   (2)

☐ Software (3)

☐ People (e.g. authors, editors, Pis, etc.) (4)

☐ Research instruments (5)

☐ Research equipment or facilities (6)

☐ Projects (7)

☐ Audiovisual resources (8)

☐ Metadata (bibliographic data) (9)

☐ Other – please specify (10) _____

☐ None   (11)

X→

Q30

Thinking about the answers you have provided to the previous question, have you **reused** any of these persistent identifiers in any of your related or future work? If so, which do you recall reusing?

Reusing *might, for example, include using a persistent identifier to cite or link to a preprint within an academic article, or to refer to research data within a data availability statement, or refer to co-authors (via ORCID) in an academic work, and so forth.*

☐ An accepted manuscript or preprint made available in an open repository (e.g. subject repository, institutional repository, preprint server, etc.) (1)

☐ Research data or open data   (2)

☐ Software (3)

☐ People (e.g. authors, editors, Pis, etc.) (4)

☐ Research instruments (5)

☐ Research equipment or facilities (6)

☐ Projects (7)

☐ Audiovisual resources (8)

☐ Metadata (bibliographic data) (9)

☐ Other – please specify (10)

☐ None   (11)

Q31 Please select which label best describes your job role

○ Professor / Reader (1)

○ Lecturer (2)

○ Research Fellow (3)

○ Research Assistant (4)

○ Postdoc (5)

○ PhD Research Student (6)

○ Research Support (7)

○ Other (8)

Q32 Please select which label best describes the broad discipline in which you work

○ **Physical Sciences** (includes: Chemical Engineering, Chemistry, Computer Science, Earth and Planetary Sciences, Energy Engineering, Environmental Science, Material Science, Mathematics, Physics and Astronomy, Multidisciplinary) (1)

○ **Health Sciences** (includes: Medicine, Nursing, Veterinary, Dentistry, Health Professions, Multidisciplinary) (2)

○ **Social Sciences** (includes: Arts and Humanities, Business, Management and Accounting, Decision Sciences, Economics, Econometrics and Finance, Psychology, Social Sciences, Multidisciplinary) (3)

○ **Life Sciences** (includes: Agricultural and Biological Sciences, Biochemistry, Genetics and Molecular Biology, Immunology and Microbiology, Neuroscience, Pharmacology, Toxicology and Pharmaceutics, Multidisciplinary) (4)

Q33 Please select the country in which you are based

▼ Afghanistan (1) ... Zimbabwe (249)