




Using Web Data for Islamic Studies

Rich Nielsen
MIT


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 **Fatawa** | [Is Purity essential for reading Qur'aan from one's mobile phone?](#)

Is Purity essential for reading Qur'aan from one's mobile phone?

Islam Q&A








Views Count: **3,498**  **4**  **0**    **0**  **0**  

Question:





Some mobile phones have a Quraan programs which enable one to read the Quraan anytime on the mobile's screen. Is Taharah (Purity) a condition before one starts reciting?.

Answer:

Praise be to Allaah.



     

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-  [Virtues of the Day of Arafaah](#)
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New Fatawa

-  [Virtues of the Day of Arafaah](#)
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Islam Q&A

Welcome and thank you!

Goals:

- interesting data sources
- new skills
- fun?

Materials: <http://www.mit.edu/~rnielsen/MasterClassANU.zip>

(My website > Helpful Stuff > ANU master class materials)

Plan

Installing R

Introductions

A motivating example

Data sources

Collect and analyze data with R

Questions? Ask throughout.

Code won't run? Ask, but we may need to move on.

Breaks: 1:50pm-2pm, 2:50pm-3pm.

Installing R

<https://www.r-project.org/>



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The R Project for Statistical Computing

Getting Started

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To **download R**, please choose your preferred [CRAN mirror](#).

If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

News

- **R version 3.4.3 (Kite-Eating Tree) prerelease versions** will appear starting Monday 2017-11-20. Final release is scheduled for Thursday 2017-11-30.
- **R version 3.4.2 (Short Summer)** has been released on Thursday 2017-09-28.
- **The R Journal Volume 9/1** is available.
- **R version 3.3.3 (Another Canoe)** has been released on Monday 2017-03-06.
- **The R Journal Volume 8/2** is available.
- **useR! 2017** (July 4 - 7 in Brussels) has opened registration and more at <http://user2017.brussels/>
- Tomas Kalibera has joined the R core team.

Installing R

<https://www.r-project.org/>

CRAN Mirrors

The Comprehensive R Archive Network is available at the following URLs, please choose a location close to you. Some statistics on the status of the [windows release](#), [windows old release](#).

If you want to host a new mirror at your institution, please have a look at the [CRAN Mirror HOWTO](#).

0-Cloud

<https://cloud.r-project.org/>

<http://cloud.r-project.org/>



Automatic redirection to servers worldwide, currently sponsored

Automatic redirection to servers worldwide, currently sponsored

Algeria

<https://cran.usthb.dz/>

<http://cran.usthb.dz/>

University of Science and Technology Houari Boumediene

University of Science and Technology Houari Boumediene

Argentina

<http://mirror.fcaglp.unlp.edu.ar/CRAN/>

Universidad Nacional de La Plata

Australia

<https://cran.csiro.au/>

<http://cran.csiro.au/>

<https://mirror.aarnet.edu.au/pub/CRAN/>

<https://cran.ms.unimelb.edu.au/>

<https://cran.curtin.edu.au/>

CSIRO

CSIRO

AARNET

School of Mathematics and Statistics, University of Melbourne

Curtin University of Technology

Austria

<https://cran.wu.ac.at/>

<http://cran.wu.ac.at/>

Wirtschaftsuniversität Wien

Wirtschaftsuniversität Wien

Belgium

<http://www.freeststatistics.org/cran/>

<https://lib.ugent.be/CRAN/>

<http://lib.ugent.be/CRAN/>

K.U.Leuven Association

Ghent University Library

Ghent University Library

Installing R

<https://www.r-project.org/>



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The Comprehensive R Archive Network

Download and Install R

Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:

- [Download R for Linux](#)
- [Download R for \(Mac\) OS X](#)
- [Download R for Windows](#)

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.

Source Code for all Platforms

Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably don't want to do it!

- The latest release (Thursday 2017-09-28, Short Summer) [R-3.4.2.tar.gz](#), read [what's new](#) in the latest version.
- Sources of [R alpha and beta releases](#) (daily snapshots, created only in time periods before a planned release).
- Daily snapshots of current patched and development versions are [available here](#). Please read about [new features](#) and [bug fixes](#) before filing corresponding feature requests or bug reports.
- Source code of older versions of R is [available here](#).
- Contributed extension [packages](#)

Questions About R

- If you have questions about R like how to download and install the software, or what the license terms are,

Installing R

<https://www.r-project.org/>



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R for Windows

Subdirectories:

[base](#)

Binaries for base distribution. This is what you want to **install R for the first time**.

[contrib](#)

Binaries of contributed CRAN packages (for R \geq 2.13.x; managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.

[old.contrib](#)

Binaries of contributed CRAN packages for outdated versions of R (for R < 2.13.x; managed by Uwe Ligges).

[Rtools](#)

Tools to build R and R packages. This is what you want to build your own packages on Windows, or to build itself.

Please do not submit binaries to CRAN. Package developers might want to contact Uwe Ligges directly in case of questions / suggestions for Windows binaries.

You may also want to read the [R FAQ](#) and [R for Windows FAQ](#).

Note: CRAN does some checks on these binaries for viruses, but cannot give guarantees. Use the normal precautions with downloaded

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R-3.4.2 for Windows (32/64 bit)

[Download R 3.4.2 for Windows](#) (75 megabytes, 32/64 bit)

[Installation and other instructions](#)

[New features in this version](#)

If you want to double-check that the package you have downloaded matches the package distributed by CRAN, you can compare the [md5sum](#) the [fingerprint](#) on the master server. You will need a version of md5sum for windows: both [graphical](#) and [command line versions](#) are available.

Frequently asked questions

- [Does R run under my version of Windows?](#)
- [How do I update packages in my previous version of R?](#)
- [Should I run 32-bit or 64-bit R?](#)

Please see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.

Other builds

- Patches to this release are incorporated in the [r-patched snapshot build](#).
- A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#)
- [Previous releases](#)

Note to webmasters: A stable link which will redirect to the current Windows binary release is <http://<CRAN MIRROR>/bin/windows/base/release.htm>.

Last change: 2017-09-28, by Duncan Murdoch

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R for Mac OS X

This directory contains binaries for a base distribution and packages to run on Mac OS X (release 10.6 and above). Mac OS 8.6 to 9.2 (and Mac OS 9.2.2) are no longer supported but you can find the last supported release of R for these systems (which is R 1.7.1) [here](#). Releases for old Mac OS X (through Mac OS X 10.5) and PowerPC Macs can be found in the [old](#) directory.

Note: CRAN does not have Mac OS X systems and cannot check these binaries for viruses. Although we take precautions when assembling binaries, you should use the normal precautions with downloaded executables.

As of 2016/03/01 package binaries for R versions older than 2.12.0 are only available from the [CRAN archive](#) so users of such versions should set their CRAN mirror setting accordingly.

R 3.4.2 "Short Summer" released on 2017/09/28

Important: since R 3.4.0 release we are now providing binaries for OS X 10.11 (El Capitan) and higher using non-Apple toolkit to provide support for OpenMP and C++17 standard features. Please read the corresponding note below.

Please check the MD5 checksum of the downloaded image to ensure that it has not been tampered with or corrupted during the mirroring process. In the *Terminal* application to print the MD5 checksum for the R-3.4.2.pkg image. On Mac OS X 10.7 and later you can also validate the signature using the `gpg` utility.

Files:

R-3.4.2.pkg

MD5-hash: 71d2b804c38cf2ce8f9efed1fa860
SHA-1-hash: c577a7e7c06c5a230b2932545340e9e1273dha
(ca. 61MB)

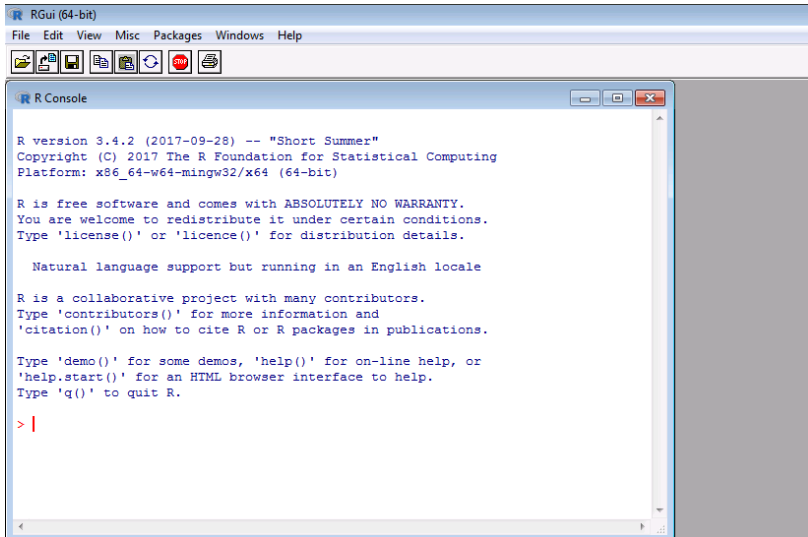
R 3.4.2 binary for OS X 10.11 (El Capitan) and higher, signed package. Contains R 3.4.2 framework, R.app GUI 1.70 in 64-bit for Intel Macs, Tcl/Tk 8.6.6 X11 libraries and Texinfo 5.2. The latter two components are optional and can be omitted when choosing "custom install", they are only needed if you want to use the `tcltk` R package or build package documentation from sources.

Note: the use of X11 (including `tcltk`) requires [XQuartz](#) to be installed since it is no longer part of OS X. Always re-install XQuartz when upgrading your OS X to a new major version.

Important: this release uses Clang 4.0.0 and GNU Fortran 6.1, neither of which is supplied by Apple. If you wish to compile R packages from sources, you will need to download and install

Installing R

R console: Windows



The screenshot shows the RGui (64-bit) application window. The title bar reads "RGui (64-bit)". The menu bar includes "File", "Edit", "View", "Misc", "Packages", "Windows", and "Help". Below the menu bar is a toolbar with icons for opening files, saving, printing, and other standard functions. The main window area is titled "R Console" and contains the following text:

```
R version 3.4.2 (2017-09-28) -- "Short Summer"
Copyright (C) 2017 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

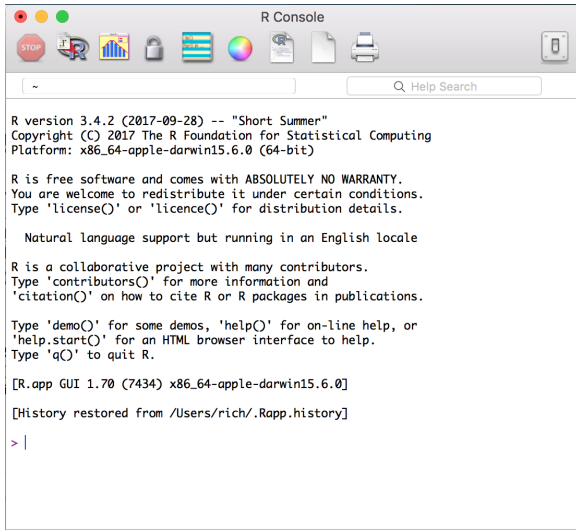
R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

Installing R

R console: Mac



```
R version 3.4.2 (2017-09-28) -- "Short Summer"
Copyright (C) 2017 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin15.6.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
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Natural language support but running in an English locale

R is a collaborative project with many contributors.
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Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

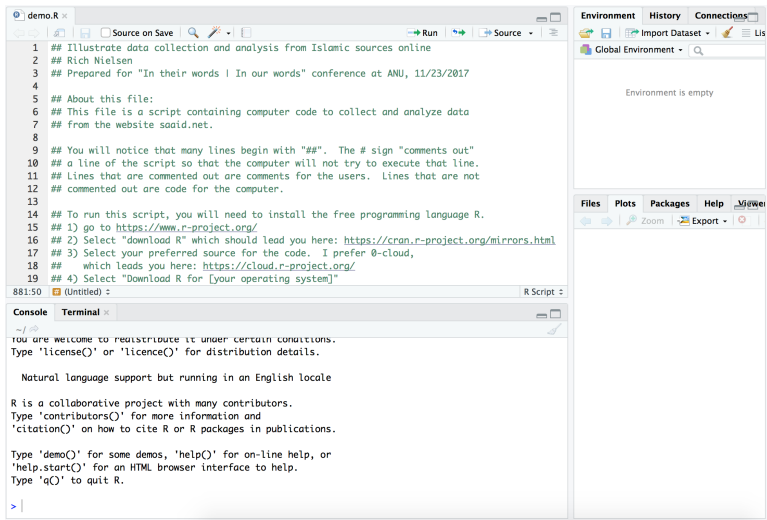
[R.app GUI 1.70 (7434) x86_64-apple-darwin15.6.0]

[History restored from /Users/rich/.Rapp.history]

> |
```

Installing R

I highly recommend RStudio (I use it for Mac)
(<https://www.rstudio.com/products/rstudio/download/>)



Introductions

A motivating example

Advance Access publication February 4, 2015

Political Analysis (2015) 23:254–277
doi:10.1093/pan/mpu019

Computer-Assisted Text Analysis for Comparative Politics

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Margaret E. Roberts

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#0521 La Jolla, CA 92093, USA
e-mail: meroberts@ucsd.edu*

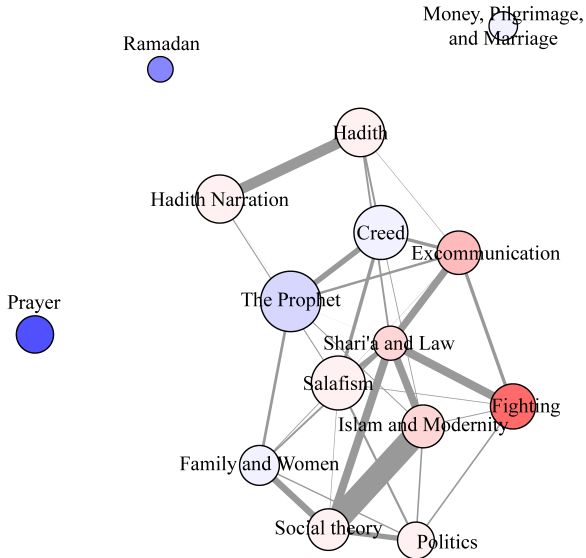
Brandon M. Stewart

*Department of Government and Institute for Quantitative Social Science, Harvard University,
1737 Cambridge Street, Cambridge, MA 02138, USA
e-mail: bstewart@fas.harvard.edu*

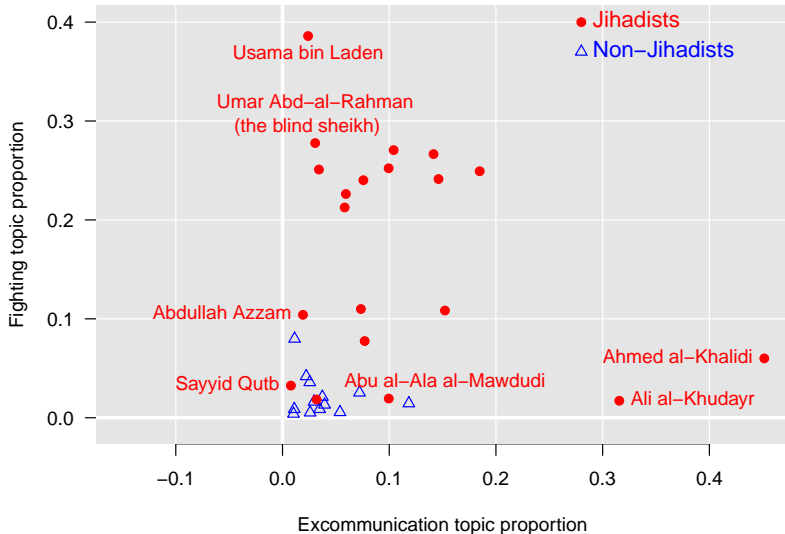
Alex Storer

Graduate School of Business, Stanford University, 655 Knight Way, Stanford, CA 94305, USA

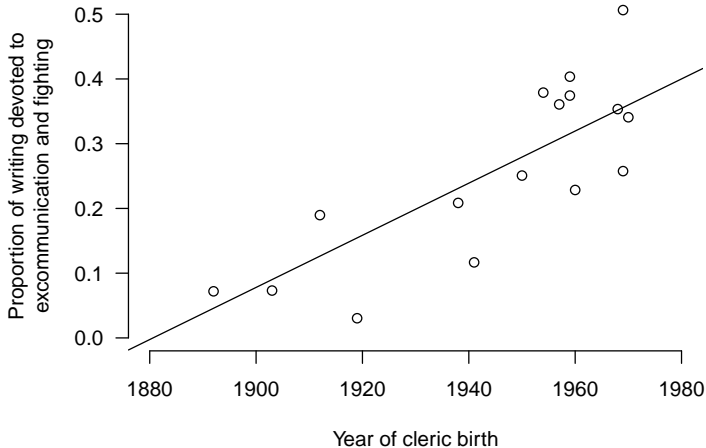
A motivating example



A motivating example



A motivating example



Data sources

Data sources

Cleric websites

(ex: Ibn Baz, Khamenei, al-Qaradawi, al-Arayfi, Hind Amer, al-Hawayni)

Islamic aggregator websites

(ex: islamway, islamonline, lahaonline, saaid.net, shamela, the old tawhed.ws)

Message boards

(ex. Islamicity, ummah.com)

Twitter, Facebook, other social media

Youtube

Wikipedia

Others?

Collect and analyze data with R

Open R

Open the script: `demo.R`

(No obligation to follow along but it might be more fun)

Next steps

Imagine new possibilities

Look at old sources in new ways

Take on a project

Google for code snippets


Take a course


Spend quality time with your data

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Is Purity essential for reading Qur'aan from one's mobile phone?

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Answer:


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