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shared the same policy goals, content analysis shows substantial
differences with regard to arms control and the Strategic Defense
Initiative (SDI), not only between Reagan and Shultz, but also among
Reagan's roles as a political leader, as chief executive, and as
statesman to the world community. Political images are intimately
linked to the definition of the issue and may have profound long-term
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is useful as a supplement to conventional research methods focusing
on policy arguments. Washington PressText is a computer readable
database which provides the full text of White House and United
States Department of State news releases, policy statements,
background information, and comprehensive coverage of all major
domestic and international news. This paper details how PressText may
be accessed through DIALOG, and how the information captured may then
be analyzed by a content analysis system for microcomputers (e.g.,
the software package WordCruncher). (AEM)

Reagan's Political Imagery on Arms Control and SDI:

Content Analysis in Political Science

Using Washington PressText

by

G. David Garson

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Send correspondence to:

G. David Garson
North Carolina State University
NCSU Box 8101
Raleigh, NC 27695

(919) 737-2468

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ABSTRACT

The use of the Washington PressText online news service for political science research is discussed in relation to content analysis of the political imagery of President Reagan and Secretary of State Shultz with regard to arms control and the Strategic Defense Initiative in 1986. While the two leaders shared the same policy goals, content analysis shows substantial differences in political imagery, not only between Reagan and Shultz, but also among Reagan's roles as political leader, as chief executive, and as statesman to the world community. Political images are intimately linked to the defining the issue and may have profound long-term impacts. The use of content analysis in research on political imagery is emphasized as a supplement to conventional research methods focusing on policy arguments. The paper provides detailed instructions on accessing database services, capturing appropriate information, and analyzing it with a leading content analysis package for microcomputers. Washington PressText, the database service illustrated, provides the full text of White House and U. S. Department of State news releases, policy statements, and background information, providing comprehensive coverage of all major domestic and international news.

Reagan's Political Imagery on Arms Control and SDI:

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Although social scientists increasingly use bibliographic databases for research through on-line telecommunications services such as Dialog (Garson, 1986; Callahan, 1985; Goldmann, 1985; Newlin, 1984), little use has been made of online full-text databases. Most political scientists are unaware that such databases exist or, if aware, are under the misimpression that analyzing the content of such databases would require a huge grant and a legion of graduate students.

The present essay details how a major full-text database pertinent to political scientists may be accessed, and how information captured from such a service may then by analyzed by the leading content analysis system for microcomputers. A foreign policy illustration is used to provide a substantive illustration of preliminary content analysis of political imagery of the President compared to the Secretary of State with regard to the Strategic Defense Initiative ("Star Wars") and arms control.

The full text database utilized and illustrated is Washington PressText (hereafter referred to as "WP"). WP provides the full text of White House and U. S. Department of State news releases, policy statements, and background information. It provides comprehensive coverage of all major domestic and international news events, with attention to governmental, legal, journalistic, diplomatic, military, academic, business and financial matters. WP presidential sources include full text of speeches, news conferences, broadcasts, statements, announcements, letters to Congress, acts signed or vetoed, nominations and appointments, executive orders, proclamations, state dinner toasts, diplomatic arrivals and departures, special briefings, fact sheets, and daily calendars. WP State Department sources include full text of speeches, news conferences and interviews, announcements, Congressional testimony, arrival/departure statements, appointments, actions on treaties, diplomatic directories, and profiles of 170 nations. WP corresponds substantially to the Weekly Compilation of Presidential Documents, the Public Papers of the Presidents series, Current Policy, the State Department Bulletin, Background Notes, as well as containing numerous other sources. WP is updated daily and contains over 10,000 records from 1981 to the present.[1]

There are numerous research and instructional uses of WP.

1

Information which is only briefly summarized in newspaper stories can be supplemented by viewing the full text of speeches only hours after they are given. Statements which were issued months or even years ago can be retrieved. The evolution of a particular policy from 1981 to the present can be chronicled. The primary research use discussed here, however, is content analysis designed to trace the evolution of imagery, differences in content between actors or agencies, etc.

While the importance of political imagery and symbolism has been recognized in the professional literature in general (in politics, see Graber; in law see Chesler, 1983, and Devins, 1985; in public policy, Edelman, 1964, Edelman, 1971, and Sherraden and Adamek, 1984) and specifically with regard to the Reagan administration (Dallek, 1984) in particular, there are only scattered attempts to utilize content analysis to place these insights on a more empirical basis. Most recent examples of content analysis concern comparisons of the press coverage from different countries' perspectives (Atwood, 1987; Giffard, 1985; Gurland, Zachary, and Taulbee, 1987; Siddiqi, 1987), analysis of local leadership (Lindsay, 1986; Svara, 1987), analysis of advertising and television (Ho, 1985; Lill et al., 1986; Swayne and Greco, 1987), and, of course, the long-standing tradition of content analysis in "Kremlinology" (Blough and Stewart, 1987). Worthy as this recent literature is, it does not yet reflect the routine application of content analysis to major political science domains - an application only recently made possible by a technical "revolution" in online full-text databases and powerful microcomputer-based analysis programs described in this essay.

The specific substantive example presented for illustration in this essay concerns communications by the Reagan Administration concerning its Strategic Defense Initiative (SDI, also called "Star Wars") and arms control issues at the time of the Reykjavik summit meeting in fall, 1986. First, however, the method of accessing the WP database service is presented below.

Telecommunications Basics

Online access to text provides a number of advantages: (1) access to text is far faster, more convenient, and dramatically less expensive than manual methods used in content analysis in the past; (2) online access eliminates errors arising from manual transcription; and (3) online access allows capture of text in a format which can be utilized by content analysis packages, database managers, and word processors operating on microcomputers.

To access text data online one must have a workstation, communications hardware, communications software, telephone lines, and an account with an online information service.

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Typically the workstation is a microcomputer although it may be a lower-cost "dumb" terminal. For this essay, the most common workstation - the IBM PC - is used.

All terminals and some microcomputers come with built-in communications hardware. Most of the time, however, it is necessary to purchase a modem (short for modulator-demodulator). Modems serve to convert the digital messages of the computer or terminal into the analog signals required by telephone lines. Sometimes modems fit on an electronic "card" inside the microcomputer, and sometimes they are in a separate external case. The modem market is heavily dominated by one company, Hayes, and consequently this essay references Hayes-compatible hardware.

It is not enough to have a microcomputer and a modem. One must have communications software which gets information from the user, as through answers to a set of menu choices, and translates them into instructions that computers can understand. This essay references one of the most common software packages, Smartcom, often supplied by Hayes with their modems.

It is also necessary to have a telephone line into which the modem connects. While it is usually possible to dial the online information service directly via normal long-distance connections, it is far cheaper to use a "packet switch network" These service allow users to dial a local telephone number. The network assembles individual local requests into efficient packets and transmits them long-distance at rates less expensive than is possible individually. TeleNet and TymNet are the leading networks.

Finally, it is necessary to have an account with the information vendor, of which the leading example is Dialog. This account will also bundle any packet switch network charges in its bill. One recommended way of obtaining a Dialog account is to join the POLINET network for social scientists of the HUMANET network for the humanities, offered through ScholarNet, NCSU Box 8101, Raleigh, NC 27695; (919) 737-7908. For a single one-time fee of $30, one may obtain access not only to POLINET and HUMANET, but also to Dialog and other networks, including DELPHI, a general interest telecommunications network. Dialog is a main menu choice from POLINET or HUMANET. Users pay a time-based charge for access.

(Dialog Information Services is located at 3460 Hillview Avenue, Palo Alto, CA 94304 (800-227-1927, marketing; 800-227-8282, training; 800-227-1960, customer service). Dialog is accessed through local phone numbers available on Telenet, Tymnet, and Dialnet carriers. The cost of Washington PressText was $35 Dialog start-up and $68/hr. connect time at the time of this writing. However, WP is one of the databases in Dialog's

Classroom Instruction Program, CIP. By joining CIP, the rate is lowered to $15 per hour, including telecommunications charges. CIP has no initiation fee and no minimum usage floor, and carries other benefits: contact the marketing number above.)

Connecting to Dialog

To establish to connection to Dialog Information Services we will use an IBM PC microcomputer, a Hayes 1200b modem, a Smartcom II communications disk, and a previously-established account number with Dialog obtained through POLINET.

Step 1. Insert your DOS system disk in drive A: and turn on the microcomputer. If you do not have an internal clock in your machine you will be asked the date and time. Enter this information. After this you will see the DOS command prompt, A>.

Step 2. Place a formatted blank data disk in drive B:. If you do not have one, place a blank disk in drive B: and enter the command FORMAT B: followed by hitting the return key.

Step 3. Remove the system disk from A: and replace it with the Smartcom II disk. Type SCOM followed by hitting the return key. This will load the communications program.

Step 4. After an initial title screen you will see the following Smartcom II menu:

```
Smartcom II              HayesMicrocomputerProducts, Inc.

1. Begin Communication   *Receive File           7.Change Printer Status (OFF)
2. Edit Set              *Send File              *Select Remote Access (OFF)
3. Select File Command   6.Change Configuration  9.Display Disk Directory (ON)
A,B - Change Drive                               0.End Communication/Program
                         Press F2 for Help

Enter Selection: ___

              [prompt appears here]

Directory of Disk A:


   [directory of files appears here]
```

Step 5. Type the B key to indicate your data will be on the disk in drive B:. The B on the left side of the menu will show in higher intensity.

Step 6. Select Option 1 from the menu to choose "Begin Communication". You will then be asked if you wish to (O)riginate or (A)nswer. Choose the O option to originate a phone call. You will then be presented with a menu of phones to call. You should choose Option Z, which is a set of standard defaults. Option Z will cause Smartcom II to ask you to type in the number you wish to dial. Enter it and hit the return key. Smartcom II will dial the number you have selected. (You may find the local number in one's directory, or in the information packet that comes with the Dialog account).

Step 7. Upon reaching the packet network you will be asked to indicate where you want to go - in our case, to Dialog. (If you are accessing Dialog via PoliNet, simply choose Dialog from the PoliNet main menu). Each packet network will have different prompts. Below are the prompts currently used by TeleNet. You should type into the computer the information listed below in braces; CR indicates the 'carriage return' or 'enter' key. Dialog provides the other information below, which may vary slightly by locality:

    <high-pitch dial tone indicating connect>[CR . CR]

    CONNECT
    telenet pad 919 18 port 3
    service: [GVC]

GVC CONNECTED

This portion of our telecommunications dialog has connected us via the packet switch network Telenet to the General Videotex Corporation (GVC), where the POLINET computer is located. Next we log into POLINET. employing the user name and password obtained when we signed up for this network:

        Username: [enter your user name; e.g., GARSOND]

        Password: [enter your password; e.g., PQ672219]

If log-on is successful, we will see something like the following:

        Hello GARSOND
        Welcome to POLINET
        Copyright (c) 1986
        North Carolina State University and
        General Videotex Corporation

        Logon at   : 31-OCT-1987 10:00:44
        Last Logon : 30-OCT-1987 09:51:13

/\/\/\/\/\/\/\/\/\/\/\'\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\'\/\/\/\/\

                    WELCOME TO POLINET !

**********   SPECIAL BULLETIN   ***********

[PoliNet presents various special messages of the day, pausing the screen with a prompt]:

        More? [N]

[PoliNet gives us a chance to stop logon information and go directly to the main menu]:

        Polinet Main Menu:
        Update   Markets
        Mail   Professional Services
        Workspace   Travel Services
        Newsletters   Financial Services
        File Distribution Center   Encyclopedia
        Conference Center   AP News ($)
        Events Schedule   Dialog ($)
        User Profile   HumaNet
        Forums   Delphi
        Online Polls   EXIT

From this menu we may select Dialog, where Washington PressText is located. First, however, we may want to turn our capture file

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on so that anything we see on the screen may be saved to our
data disk in drive B:. (Alternatively, one may turn the capture
file on and off only for the data we want, later on). Do this
from Smartcom by typing the F1 key. The Smartcom menu will
appear. Select Option 4 (Receive File), specify Stop/Start or
another protocol when prompted, and assign a file name of up to
eight characters when prompted. You may then return to the
POLINET session and select Dialog from the MAIN menu:

        MAIN>What do you want to do? [Dialog]
        This is an extra charge service.
        Connecting to Dialog, please wait...

        Dialog Information Retrieval Service now connected.
        Type CONTROL/C at any time to return to the menu.

We are now in Dialog, which proceeds to give us its logon
messages:

        Your User Number is: 054792
        Welcome to Dialog
        Dialog version 2, level 10.14.2 A
        Last logoff 30oct87 23:40:41
        Logon file001 31oct87 10:03:32

        **   **
        COPR. (c) Dialog INFORMATION SERVICES, INC. ALL RIGHTS
            RESERVED.
        NO CLAIM TO ORIG. U.S. GOVT. WORKS.
        Dialog News (Enter ?NEWS for details):

After various messages, Dialog puts us by default in the
most-used of its hundreds of databases, the ERIC database (File
1), which covers a broad range of topics, including education
and social science:

        File   1:ERIC - 66-86/OCT

            Set   Items   Description
            ---   -----   -----------

However, we want Washington PressText, which is File 145. We
obtain this number from any recent issue of Chronolog, the
monthly magazine of Dialog, or by looking in a Dialog manual. To
go to this file we type "BEGIN" or just "B" at the Dialog :

?B145

Before detailing the procedure further, however, it is useful to
mention some of the commands associated with use of Washington
PressText.

Working with the Washington PressText Database

All records in the WP file contain the full text of the original documents. You may search these documents by document title, author or speaker, corporate source, journal or series title, and publication date. Moreover, you may specify SF=PRESIDENTIAL or SF=STATE to restrict your search to one or the other subfile. Other specialized fields are available for restricting searches as follows, using the S command for Select:

By author	S AU=REAGAN, RONALD
By country	S CN=LIBYA
By source	S CS=UNITED STATES DEPARTMENT OF STATE
By issue	S IS=NO. 18
By title	S JN=DEPARTMENT OF STATE PRESS RELEASE
By date	S PD=850503
By update	S UD=850501:9999

Note dates are in yymmdd format, with a range indicated by two dates separated by a colon.

Searches can also be restricted by portion of the record to be examined, as, for instance, just the titles:

        S STAR(W)WARS/TI

The example above searches for "STAR" within a word or "WARS" just in record titles (TI). Other similar restrictions used with the trailing slash as above are: /TX (text field); /NT (notes field); /TB (table text); /CP (photo/graphic caption field); and /TN (travel note field). If no slash parameter is used, an entire-record search is conducted.

Finally, searches may be made more convenient if the records are first sorted. Sorts may be by author (AU), publication date (PD), subfile (SF), and/or title (TI):

        SORT 3/ALL/PD,AU

Thus the command above sorts all records in set 3 by publication date, and within this by author.

Once a set of records is defined, they may be sent to the capture buffer of the communications program by the TYPE command. Six type formats are available:

Format 1	Dialog accession number only
Format 2	Full record except text
Format 4	Full record with tagged fields
Format 5	Full record

```
Format 6        Title, line count, and word count
Format 8        Title and travel notes, if any
```

Normally Format 5 would be used.

Before actually searching for texts which reference SDI, we would
turn on the capture buffer of our communications program, which
directs whatever we see on the screen to a word processable text
file as well. In the case of SmartCom communications software,
this is accomplished by pressing the Fl function key, then
choosing menu option 4, Receive File. (If we want we can use the
Fl key to return to the SmartCom menu whenever we wish to stop
one file and create another to receive other text).

An annotated explanation of the use of Washington PressText
follows:

?B145
We issue the command to begin (B) file 145, which is Washington
Presstext. We are presented with various accounting messages:

```
        31oct86 10:50:05 User054392
   $0.33     0.011 Hrs Filel
   $0.12  Uninet
   $0.45  Estimated cost this file
   $0.45  Estimated total session cost   0.010 Hrs.
```

File 145:Washington PressText(SM)10/30/86
Copr. 1986 PressText(SM) News Service

```
    Set  Items  Description
    ---  -----  -----------
```

As an illustration, we can search for references to
star wars, the popular term for the Strategic Defense Initiative
(SDI):

?SS STAR(W)WARS

```
    S1    264   STAR
    S2    380   WARS
    S3     50   STAR(W)WARS
```

At the question mark command prompt, the command we give is SS
(search set) for the word STAR (case doesn't matter) within one
word (W) of the word WARS. The Dialog output shows tnere are 264
references to STAR, 380 references to WARS, but only 50
references to STAR WARS. We may now search for SDI as well in a
similar manner:

?SS   SDI

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```
     S4       179  SDI
```

We may use t'   )R connector to create a combined set of references to 'a' WARS or SDI:

?SS S3 OR S4

```
              50   S8
             179   S9
     S5      199   S8 OR S9
```

There are 199 documents related to STAR WARS or SDI. For purposes of sampling, we capture the first three dozen to our computer. It will turn out this is almost 1 megabyte of information (one million characters), which would fill three conventional IBM diskettes. For this reason, it is best to accomplish this task on a workstation equippe. with a hard disk with room to handle many megabytes of information.

The command we give is to type set 5 (T5) in format 5 (/5), which is the complete record, for records 1 through 36 (/1-36).

?T5/5/1-36

```
 5/5/1                      :set 5, format 5, record 1
0971679                     :Dialog accession number
```
  Remarks By The President At The McIntyre For Congress Rally, October 29, 1986, Roberts Municipal Stadium, Evansville, Indiana.

  The White House, Office of the Press Secretary (Evansville, Indiana)
  PUBLICATION DATE: 861029
  White House Press 'elease

   For Immediate Release

  11:05 '..M. CST

   THF PRESIDENT: Than. you very much. (Applause.) Believe me -- believe
me, Governor Orr, it's great to be back in your state again. (Applause.)
     [etc.]

(When we are done, LOGOFF signs us off both Washington PressText and Dialog):

?LOGOFF

    31oct87 10:33:58 User054392

$48.54 0.618 Hrs File145
$2.19 Telenet
$9.73 Estimated cost this file
$64.72 Estimated total session cost 0.308 Hrs.

Logoff: level 10.14.2 A 10:34:01

Dialog disconnecting, please wait...

(We are returned to the POLINET menu, from where we can EXIT).

Content Analysis of Captured Text

At this point we have a very large text file on disk. It contained, in this illustration, almost 1 million characters of text. The next task was use the block write feature of a word processor to divide this large file into discrete chunks.[2] The file was divided into 16 files consisting of speeches and news conferences by President Reagan, 9 interviews and talks by Secretary of State Shultz, 9 interviews and conferences by other administration officials, plus one file for President Reagan's address to the nation on SDI and arms control, and one file for President' Reagan's address to the United Nations on these topics.

The end resul. of editing the Washington PressText output was five files (called "books" by the content analysis program described below): one each for the address to the nation, the address to the U.N., other Reagan speeches, Shultz speeches, and speeches by other administration officials. Content analysis of each of these five "books" provides the basis for comparing the political imagery of the President in his various roles with that used by the Secretary of State.[3]

Content Analysis Procedures

Once the text is properly prepared in the "books" we wish to

compare, they are ready to be analyzed.[4] There are many text
analysis packages on the market (see Weber, 1985).[5] The one used
for illustration here is WordCruncher, hereafter referred to as
WC. WC is perhaps the leading microcomputer content analysis
package. Developed for analysis of Biblical and literature texts,
it is not well known among social scientists though it meets many
social science needs. WC is produced by Electronic Text
Corporation, 5600 North University Ave., Provo, UT 84604; (801)
226-0616; and is priced at $269. It requires an IBM with 512K
memory and 1.2 MB of free hard disk space. WC can handle multiple
input files up to 4 gigabytes (up to 50 files of up to 3MB each
in one set).

The purpose of analysis with WordCruncher is to create
indexes to each of the five "books" (Reagan address to the
nation, Reagan address to the U.N., other Reagan addresses,
Shultz addresses, addresses of other administration officials).
Frequencies are attached to each index term, and the index is
sorted by frequency. (In a more complex analysis, not undertaken
here, WC can utilize a thesaurus of like terms to create
frequency tables by meaning rather than by literal term. The VIEW
option of WC allows use of the frequency thesaurus to look up
references to high frequency words quickly and automatically, to
see the meaning in context). By examining different word
frequency patterns in each of the five "books", inferences may be
drawn about political imagery concerning SDI and arms control as
articulated by each of the five roles/document files.

WC has two main programs, INDEXETC and VIEWETC. The former
indexes documents, the latter accesses them. To start analysis
one simply types INDEXETC at the DOS prompt. An introductory
screen appears with the prompt to type the F1 key to enter
computer book(s) to be indexed. Thus INDEXETC assumes the above-
described process of creating and editing the relevant books has
already occurred. (Later, VIEWETC will assume that the book files
all have the suffix .BYB). After typing F1, a second screen
appears onto which the user may type the name(s) of the book(s)
available for analysis. For example, President Reagan's address
to the nation was contained in a file called NATION.BYB, so this
was entered at the prompt. After a few other messages, the user
is prompted to press F1 again to start analysis.

INDEXETC then presents a progress screen during analysis,
which can take anywhere from a few seconds to a matter of hours.
The address to the nation, some 19,000 characters long, took
about three minutes to analyze, for instance. The progress screen
shows the elapsed time and the estimated time to go as well as
various statistical data such as the total words in the book, the
total unique words, and the number of characters. The output of
INDEXETC is an alphabetically arranged term list with
frequencies. By typing the additional command SORTBYF <bookname>
from the DOS prompt, additional files are created with the index

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sorted by frequency to highlight terms frequently used.

The unsorted index to the NATION.BYB file, for example, is contained in the frequency file, NATION.BYF, and looks as follows:

```
***********   Unique Words Read =        915
**********    Total  Words Read =       2986
**********    Total  Chars Read =      14142
**********    Books        Found =         1
**********    Chapters     Found =         1
**********    Paragraphs   Found =         1
       1 abandon
       7 abm
       3 about
       2 above
       1 accept
       1 accident
       2 accords
       1 across
       et cetera
```

The sorted files, of course, look similar, but words are grouped according to frequency of use in a given book.

While WC is not elaborate in its search and statistical features, it is a powerful method of establishing an index sorted by frequency. While more specialized content analysis software would be needed for detailed analysis, WC is quite suitable for preliminary investigation to establish broad patterns in research on political imagery, and to do so quickly and easily. In this example, almost a million characters of information were taken from Washington PressText, edited, and analyzed with WC in less than a single day. Done manually, these tasks would have constituted a staggering and probably impossible burden.

Analysis of Political Symbolism in SDI and Arms Control Policy

Content analysis of the Washington PressText files on SDI and arms control showed essential similarity in word frequency between President Reagan's speeches and those of Secretary of State Shultz on terms relating directly to SDI, arms control, and the Reykjavik summit meeting between President Reagan on Soviet leader Gorbachev, as shown in the data below. This, of course, is due to the fact that the documents were selected to be about the same subject, and were further edited to delete discussions of other topics. Consequently, in light of the frequency comparisons below, we can have confidence the "book" of Reagan texts is similar in content to the "book" of Shultz texts in subject matter.

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Data are expressed as percentages as well as counts. Thus the 5% after the term WEAPONS below means that this term was among the top 5% most frequent terms used by the President. (Naturally, the top few percent in almost all cases is taken by common words such as a, an, the, I, and so on). Thus a higher percentage reflects a lower word frequency usage.

**FREQUENT WORDS FREQUENT FOR BOTH REAGAN AND SHULTZ
TO ABOUT THE SAME DEGREE**

	Reagan's Speeches		Shultz's Speeches	
SDI	2%	(71)	5%	(42)
PRESIDENT	2%	(56)	2%	(106)
ICELAND	2%	(56)	8%	(22)
SOVIET	2%	(51)	3%	(62)
MISSILES	3%	(48)	3%	(77)
UNITED	3%	(47)	4%	(48)
SOVIETS	3%	(46)	4%	(54)
NUCLEAR	3%	(41)	5%	(38)
ARMS	4%	(36)	4%	(45)
GORBACHEV	4%	(35)	4%	(47)
WEAPONS	5%	(32)	7%	(26)
STRATEGIC	5%	(32)	4%	(55)
BALLISTIC	5%	(30)	5%	(40)

The President tended to refer to "SDI" and Shultz to "Strategic Defense Initiative"' The President tended to refer to "Iceland" whereas Shultz often referred to "Reykjavic" also (63 times, 3%).

The difference tables below show terms in President Reagan's speeches and news conferences during the 1986 election period on the one hand, and in Secretary of State Shultz's speeches and news conferences during the same period on the other, in which the two leaders differed significantly.[6]

**DIFFERENCES BETWEEN REAGAN AND SHULTZ
REAGAN MORE THAN SHULTZ**

	Reagan's Speeches		Shultz's Speeches	
PEACE	5%	(27)	BELOW 33%	(3)
STRENGTH	7%	(21)	21%	(7)
SUPPORT	6%	(23)	BELOW 33%	(1)
AMERICAN	3%	(41)	15%	(10)
COUNTRY	7%	(21)	BELOW 33%	(3)
WORLD	3%	(46)	10%	(16)
YOUNG	7%	(19)	BELOW 33%	(0)

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```
TECHNOLOGY    7% (20)         BELOW 33% (2)
POLICY        6% (24)         15% (10)
```

DIFFERENCES BETWEEN REAGA AND SHULTZ
SHULTZ MORE THAN REAGAN

Reagan's Speeches		Shultz's Speeches	
AGREEMENT	6% (24)	3% (71)	
AGREE	19% (6)	6% (31)	
COULD	6% (26)	3% (56)	
IMPORTANT	10% (13)	4% (55)	
GOOD	12% (11)	4% (46)	
ABLE	10% (13)	5% (38)	
MIGHT	10% (13)	5% (36)	
CHANGE	27% (4)	6% (32)	
POSSIBLE	13% (10)	7% (29)	

We thus see the President is more apt than Shultz to speak in terms of images of strength and support associated with peace, with global references to the world, the country, America, and the young, and the need for policy in relation to keeping up with new technology related to strength and peace. A typical excerpt, delivered repeatedly in political speeches around the country, is shown below:

> "But ladies and gentlemen, we've come now to an issue that transcends in importance even all the other crucial matters I've mentioned my most solemn duty as President the safety of the American people and the security of the United States. Here, too, because of the Republican support, we've been able to restore America's strength."

> "And finally, there's another special accomplishment. We remain committed to our decision to move ahead with our Strategic Defense Initiative against ballistic missiles the thing we call SDI. Today we're dealing with the Soviet Union from a position of strength and it was SDI that brought the Soviet Union to the bargaining

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table. And let me pledge to you our goal is to keep America strong, to save the West from mutual nuclear terror, to make ballistic missiles obsolete and, ultimately, to eliminate them from the face of the Earth. (Applause.)

[Remarks By The President At The McIntyre For Congress Rally, October 29, 1986, Roberts Municipal Stadium, Evansville, Indiana.]

Secretary of State Shultz, who ostensibly holds the same policy, is more apt than the President to speak on the same subject in terms of images of the possible/could/might/able in relation to a change/agreement which is good/important. A typical illustrative excerpt is shown below:

"Well, there is a perfectly good possibility of reaching agreement on INF. The leaders developed a great deal of material that people can try to build on."

"But as far as we're concerned, we're going to keep driving to get this agreement that I think Europeans want, our friends in Asia want it, we want it, and we hope the Soviet Union wants it."

"The Soviets insisted on what would have been a radical change in the ABM Treaty to restrict research -- other than the kind of research done on the system that they have deployed -- to the laboratory. Now, what that means is a proposal to cripple strategic defense research...This difference of opinion about research was known before we arrived in Reykjavik, but so were a lot of other differences. And many of these differences were narrowed greatly or even resolved, and both parties made concessions...The President continues to be ready to share the results of the research on strategic defense, and he reiterated that offer to Mr. Gorbachev.

[Press Conference By The Honorable George P. Shultz, Secretary Of State, At NATO Headquarters In Brussels, October 13, 1986.]

While the policies articulated by President Reagan and his
Secretary of State, reflected in the documents analyzed here,
could not be said to reveal a substantive difference between the
two leaders, the political imagery is rather different. The
emphasis in the President's imagery is on peace through strength,
while in the case of Secretary of State Shultz, the imagery
emphasizes possibilities of agreement with the Soviets.

This is not to say that the Secretary favors arms control
agreement and the President does not. Content analysis shows,
however, that the imagery used by the two leaders defines the
issue differently. **The political images that define the issue may
ultimately have far more impact than the specific policy
arguments which are the center of conventional analysis of
foreign policy.** It is by supplementing conventional analysis with
attention to fundamental underlying images that content analysis
makes its contribution.

We now turn to analysis of imagery used by President Reagan
in his three roles: the primarily political role reflected in
his speeches around the country (the role analyzed in data
above), his role as chief executive as reflected in his address
to the nation on arms control and SDI, and his role as statesman
reflected in his address to the United Nations on arms control
and SDI. First we will examine the terms which differentiated
President Reagan and Secretary of State Shultz.

DIFFERENCES AMONG PRESIDENT REAGAN'S ROLES

Political Speeches		Address to the Nation		Address to the UN	
PEACE	5% (27)	9% (7)		2% (19)	
STRENGTH	7% (21)	12% (5)		12% (5)	
SUPPORT	6% (23)	15% (4)		15% (4)	
AMERICAN	3% (41)	6% (10)		6% (10)	
COUNTRY	7% (21)	15% (4)		15% (4)	
WORLD	3% (46)	4% (14)		4% (14)	
YOUNG	7% (19)	BELOW 33%	(1)	BELOW 33%	(1)
TECHNOLOGY	7% (20)	BELOW 33%	(0)	BELOW 33%	(0)
POLICY	6% (24)	8% (8)		8% (8)	
AGREEMENT	6% (24)	8% (8)		8% (8)	
AGREE	19% (6)	BELOW 33%	(1)	BELOW 33%	(1)
COULD	6% (26)	6% (10)		6% (10)	
IMPORTANT	10% (13)	BELOW 33%	(1)	BELOW 33%	(1)
GOOD	12% (11)	BELOW 33%	(2)	BELOW 33%	(2)
ABLE	10% (13)	BELOW 33%	(0)	BELOW 33%	(0)
MIGHT	10% (13)	BELOW 33%	(1)	BELOW 33%	(1)
CHANGE	27% (4)	BELOW 33%	(1)	BELOW 33%	(1)
POSSIBLE	13% (10)	BELOW 33%	(0)	BELOW 33%	(0)

Except for a great emphasis on imagery of peace i his address to the United Nations, what the data above show is that President Reagan was strikingly similar in his imagery as reflected in his addresses to the nation (the chief executive role) and to the United Nations (his statesman role). In both cases President Reagan deemphasized the images most associated with his political role, though these terms were still used more frequently than in Secretary Shultz's speeches (see the upper block of data above). In images which Shultz had emphasized much more than the President (see the lower block of data above), Reagan drew even further away from the Secretary of State.

In addition to peace, as the table below shows, the images emphasized in the statesman role are freedom, human rights, the future, avoidance of war, and hope. Of these, freedom and human rights are emphasized more in the statesman role than in the chief executive role, and more in that role than in the political

IMAGES DIFFERENTIATING PRESIDENTIAL ROLES

Political Speeches		Address to the Nation		Address to the UN	
FREEDOM	7% (19)	4% (13)		4% (13)	
HUMAN	15% (8)	10% (6)		4% (13)	
FUTURE	8% (17)	BELOW 33% (2)		5% (11)	
WAR	15% (8)	21% (3)		5% (10)	
HOPE	17% (7)	BELOW 33% (1)		7% (8)	

role. On the other hand, the future, the avoidance of war, and hope, which figure prominently in the statesman role, are minor themes in the political role and almost absent in the chief executive role.

Conclusion

In summary, a content analysis was undertaken of the speeches, interviews, press conferences, and other documents of President Reagan and Secretary of State Shultz with regard to arms control and the "Star Wars" initiative in fall, 1986, at the time of the US-USSR summit at Reykjavik.

The use of the Washington PressText online news service for political science research has been discussed in relation to content analysis of the political imagery of President Reagan and Secretary of State Shultz. While the two leaders shared the same policy goals, content analysis shows substantial differences in

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political imagery, not only between Reagan and Shultz, but also among Reagan's roles as political leader, as chief executive, and as statesman to the world community. Political images are intimately linked to the defining the issue and may have profound long-term impacts.

The use of content analysis in research on political imagery has been emphasized as a supplement to conventional research methods focusing on policy arguments alone. Such methods wrongly proceed from the assumption that analysis of rational factors alone tells the whole story. The present essay has provided detailed instructions for carrying out preliminary content analysis by accessing the Washington PressText database service, capturing appropriate information, and analyzing it with a leading content analysis package for microcomputers.

Why differences of imagery exist between agreeing leaders of the same administration, or even among various roles of the President himself, and the consequences of these differences in the long term for public opinion and policy definition are a research agenda which extends beyond the scope of the present paper. It is hoped, however, that content analysis has been shown to be a tool which usefully raises interesting issues for further investigation and that it is a tool which microcomputing has revolutionized in terms of ease and convenience of use.

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Notes

1. Washington PressText is produced by PressText (tm) News Service, 112 South Patrick Street, Alexandria, VA 22314; (703) 549-2884.

2. In the case of WordPerfect, block write is accomplished by moving the cursor to the start of a block of text, pressing Alt-F4, moving the cursor to the end of the block, pressing F10, and giving the file name to save under. In WordStar, the same task is accomplished by typing Ctrl-K-B at the beginning and Ctrl-K-K at the end of the block, the typing Ctrl-K-W, and giving the file name to save under.

3. Documents associated with other administration officials are not analyzed in this essay, for the sake of brevity.

4. The "books" are files which aggregate the like texts (e.g., all Reagan speeches). For content analysis they are saved in DOS ASCII format, not the native word processor format. For WordPerfect, this means saving the file with Ctrl-F5, 1. For WordStar, this means using the non-document (N) mode.

5. Many word processors themselves contain some content analysis functions. WordPerfect, for example, allows once to construct a "concordance" file (see special features, pp. 103-107 of manual), on which basis WordPerfect will find every occurrence of any word or phrase listed and create an index for them. WordPerfect also supports multi-file searches, wildcard searches, and AND/OR logic and +, < and > operators.The spell checker also does word counts. For further discussion, see Hong (1984) and Grafton and Permaloff (1987). Likewise, it is possible to use dBASE III+, the leading microcomputer database manager, for content analysis (see Hong, 1986).

   In addition, there are numerous other text analysis programs. Except where noted, all those listed here are for the IBM PC. FIND.EXE is a free program on the MS-DOS System disk and can be used for rudimentary analysis (see the IBM DOS manual). The following batch file will allow you to find the occurrence of any string in a set of document files ending with a given suffix:

```
ECHO OFF
CLS
ECHO Searching %2 for lines containing "%1"
FOR %%P IN (%2) DO FIND "%1" %%P
```

Save this batch file as SEARCH.BAT. The command SEARCH USSR *.DOC, for instance, will search for the term USSR in the contents of all default directory files ending with .DOC. Any finds will be listed, showing the entire line in which the find

occurs, but FIND will not do word counts. Type Ctrl-PrtSc first to send output to the printer.

SUPER-Search is a $10 program from Patri-Soft, Norm Patriquin, POB 8308, San Bernadino, CA 92412. It allows menu-driven or command-driven searches and can scan text for phrases as well as words, and will process multiple files on multiple disks or directories. You can also place all files containing a given phrase into a single aggregate file automatically, or you can save to file all lines containing a find.

Content Analysis ($23, National Collegiate Software Clearinghouse, NCSU Box 8101, Raleigh, NC 27695; 919-737-3067) is the only Apple II program listed here. Designed a few years ago by the author for social science, it handles AND/OR/NOT logic, phrases as well as words, and does up to 50 simultaneous complex searches from user-defined and saved dictionaries, but it is very slow.

In-Sight ($95; Pearlsoft, Inc., 25195 SW Parkway, Box 638, Wilsonville, OR 97070; 800-652-0600) creates multi-file indices on the fly. That is, as you move text files to your library disk, the program creates an index file that can be used later to query your library to retrieve files containing desired keywords. This product is particularly useful if you have a large number of small files, and it is compatible with WordPerfect, WordStar, and many other word processors.

Golden Retriever ($99, SKDATA, POB 413, Burlington, MA 01803; 617-229-8909) contains additional features to allow finds for "near-misses" to a specified word or phrase, and it allows wildcard searches (look for terms beginning or ending with a certain pattern). Not just lines by blocks of text containing a find may be sent to an accumulation file. A demo version which works only with floppy disks is available for $5.

DRAGNET ($145; Access Softek, 3204 Adleine St., Berkeley, CA 94703; 800-222-4020; in CA, 800-445-6966) adds even more features, including Boolean logic for searches, nested searches, storing search definitions, default case insensitivity.

ZyIndex ($145; ZyLab Corp., 233 East Erie Street, Chicago, IL 60611; 800-544-6339) can search up to 500 files (other versions up to $695 search up to 15,000 files), where files are written by almost any common word processor or are ASCII files. Capacities include Boolean logic, wildcard searching, using parentheses to group commands in complex search strings, searching restricted by file date.

Ask Sam ($160; Seaside Software, POB 31, Perry, FL 32347; 800-3-ASKSAM) provides nearly all the above functions, and in addition allows searches which specify that a given string must

occur before (or after) another, or that finds be limited only to first occurrences. It can only deal with a single file, but that file may contain up to 4 billion records each unlimited in length. It supports arithmetic calculations in searching (e.g., > for more than).

Additional content analysis software is discussed in the appendix to Weber (1985).

6. Significance tests are not presented in this essay as they are not appropriate for this type of data, which can be considered an enumeration and is not a random sample. The term "significance" is used in its generic sense of "importance" in this essay, not in its narrower statistical sense.

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