

Chicago Manual of Style

GUIDELINES

Introduction

- This is a brief guide to **Chicago style**, the rules for manuscript preparation laid out in the *Chicago Manual of Style* (CMS)
- This guide is based on the rules and guidelines provided in CMS 16th edition; the University of Chicago Press, the publisher of CMS, periodically releases new editions, which may include additions or adjustments

What Is CMS?

1. CMS defines the editorial style of the University of Chicago Press, a major publisher of academic books and journals; the press has published its style guide in various editions since 1906
2. Over time, other publishing organizations have adopted CMS rules for their own work
3. The flexibility and expansiveness of the rules make CMS style useful for a number of contexts, including academic research papers and business reports, as well as published manuscripts

Preparing a Manuscript

1. The rules that follow are typical requirements
2. Different contexts will have different requirements; always consult your professor or publisher for specifics

General Document Layout

1. Use one-inch margins; set text flush left and double-spaced with no extra lines between paragraphs; indent the first line of paragraphs one-half inch
2. All headings and subheadings should be set at the margin, distinguished from each other by use of type size and styling (i.e., **bold** or *italics*)
3. Titles and headings use headline-style capitalization (Initial Capitals, not ALL CAPITALS)
4. Use italics where italics are meant, not underlining
5. Where possible, use word-processor functions to indent paragraphs and format lists; avoid using spaces, tabs, or extra returns, and turn off automatic hyphenation

Illustrations, Tables & Charts

1. **Illustrations** include artwork or any other presentation in images rather than in text or numbers, such as maps or charts; **tables** are complex lists presented in columns and rows
2. Illustrations, charts, maps, and other graphical representations are typically grouped together and referred to as **figures**
 3. All figures and tables are numbered and referred to in the text by number; figures and tables are numbered separately (Figure 1, Table 1, Figure 2, Table 2, etc.)
4. Figures and tables must be referred to in the text and must have descriptive captions; captions appear above tables but below figures
5. Notes for tables and figures are numbered separately from notes for the larger manuscript and appear just below the table or figure (for figures, above the caption); source notes also appear with the table or figure, above other notes
6. Column heads and labels in tables should be as brief as possible to minimize clutter; abbreviations and symbols are allowed

Style & Usage

1. Do not confuse common usage with good usage—when in doubt, look it up!
2. This section provides a basic overview; usage guides, such as *Garner's Modern American Usage*, may also be helpful
3. CMS recommends *Merriam-Webster's Collegiate Dictionary* to resolve usage and spelling issues (see **Tricky Words**, p. 2)

Bias-Free Language

1. **Bias-free language** refers to both gender-neutral language and language describing people with disabilities, people from particular cultures or ethnic groups, and others
2. The goal is not political correctness but rather avoiding unintentional judgments, preserving credibility, and achieving maximum clarity
3. As a rule, use adjectives, not nouns (e.g., “a deaf person,” not “a deaf-mute”; “a Jewish man,” not “a Jew”)
4. Some groups advocate the use of “**person-first**” language; this is rarely offensive and should be preferred where it does not create very awkward sentences (e.g., “a child with autism,” not “an autistic child”; “a person who stutters,” not “a stutterer”)

Tactics for Achieving Gender Neutrality

Although the use of *they* and *their* as first-person pronouns has become common in informal speech, it is not acceptable in formal American English, and *helshe* or *shhe* constructions are distracting and awkward; instead, try these tactics:

1. Omit the pronoun
 - Before:** The student should carefully review the assignments when they are sent to him.
 - After:** The student should carefully review the assignments when they are sent.
2. Use a plural noun
 - Before:** The teacher should update the gradebook when she receives the papers.
 - After:** Teachers should update their gradebooks when they receive the papers.
3. Use an article instead of a pronoun
 - Before:** The author should review his pages carefully.
 - After:** The author should review the pages carefully.
4. Substitute a neutral pronoun
 - Before:** A teacher in a wealthy school is likely to have more access to computers than she will in a poorer district.

Copyright & Fair Use

1. **Copyright** is a complex legal area, as are the permissions that must be obtained to reuse parts of previous works in a published book or article; if you are writing for publication, consider working with an experienced permissions editor
2. Most academic uses of other works are likely to fall under the **fair use doctrine**; fair use allows small excerpts from other copyrighted works to be used for the purposes of criticism, analysis, or evidence
3. **Paraphrasing** does not escape copyright law; extensive paraphrasing is subject to the same copyright and fair use limitations as direct quotation
4. All uses, whether under fair use or by permission, must be properly referenced and cited to avoid plagiarism (see **Documentation**, p. 4)
5. See the **Quotations** section (p. 4) for advice about how to punctuate and format quotations from other works

Fair Use

1. The University of Chicago Press (UCP) makes its definition of “fair use” available on the web (<http://www.press.uchicago.edu/Misc/Chicago/permissions.html>); the following suggestions are adapted from both that source and CMS
2. Rules of thumb such as those outlined here are not part of copyright law and have no legal force; the following are intended only to provide some guidance
3. The key consideration in determining whether a use is fair use is whether the use in some way transforms or recontextualizes the original rather than merely appropriating it; quotation to critique an argument, or to support an original argument, is fair use, but the same amount of quotation merely to repeat the argument may not be
4. Fair use allows reuse of only small portions of a work and *never* a complete work, no matter how short; the UCP guidelines specify no more than 5 percent or 5,000 words, whichever is less
5. Quotations should be short—no more than a few paragraphs of a long work or a few lines of a poem—and should be interspersed with original text

After: A teacher in a wealthy school is likely to have more access to computers than one in a poorer district.

5. Use a *who* construction rather than an *if* construction
 - Before:** If a student is accused of plagiarism, he must appear before the discipline board.
 - After:** A student who is accused of plagiarism must appear before the discipline board.
6. Use the passive voice to avoid a pronoun
 - Before:** The manager will forward the e-mail as soon as she receives it.
 - After:** The manager will forward the e-mail as soon as it is received.
7. Use *he* or *she*
 - Before:** If a student is accused of plagiarism, he must appear before the discipline board.
 - After:** If a student is accused of plagiarism, he or she must appear before the discipline board.
8. Repeat the noun instead of using a pronoun
 - Before:** The student should speak only when he is called on.
 - After:** The student should speak only when the student is called on.

Punctuation

1. All punctuation should be styled like the main or surrounding text unless it belongs to the styled matter (e.g., it is part of a title)
2. Periods and commas fall inside closing quotation marks; all other punctuation marks fall outside the closing quotation mark unless they are explicitly part of the quoted material
3. Always use one space between sentences and after colons, not two
4. Use normal punctuation with URLs and e-mail addresses
5. The discussion that follows uses some basic grammatical terms (see **An Introduction to Grammar**, p. 3)

Commas

Use commas:

1. To separate items in a series or list; **NOTE:** CMS style strongly encourages the use of what is called the **serial comma**—the comma between the next-to-last item in a list of three or more items and the word *and*—to ensure clarity
 - EX:** The agenda included a brief introduction, a talk by an invited speaker, and a brief question-and-answer period, followed by a reception.

- To set off nonrestrictive clauses introduced by *which*
EX: Her car, which is parked at the curb, was broken into last week.
- To set off nonrestrictive appositives
EX: Jane's husband, Daniel, carved the turkey.
- To set off parenthetical asides
EX: The announcement was, to say the least, a shock.
- To join two independent clauses connected by a conjunction
EX: The students didn't protest, but they were not happy about the tuition increases.
- After a dependent clause that precedes an independent clause
EX: If she accepts the job, she will start work on Monday.
- To separate multiple adjectives preceding a noun if the adjectives could be separated by *and* without affecting the meaning of the sentence, or to separate adjectives repeated for emphasis
EX: It was the longest, hottest night of a long, hot summer.
EX: To be absolutely clear, it was very, very warm.
EX: She has many furry dogs.
- With dates, addresses, and place names in running text
EX: Asheville, North Carolina, is near the Blue Ridge Parkway.
EX: July 4, 1776, is a date that will be long remembered.
- To introduce a quotation, unless a conjunction is used
EX: Einstein said, "Genius is 99 percent perspiration, 1 percent inspiration."
But Einstein said that "genius is 99 percent perspiration, 1 percent inspiration."

Semicolons

Use semicolons:

- To join two independent clauses without a conjunction; the use of a semicolon rather than a period indicates a close relationship between the two clauses
EX: He stole the car; he went to jail.
- To join two clauses using transitional adverbs such as *however* or *therefore*; the adverb should be followed by a comma
EX: The students were very unhappy about the tuition increases; however, they didn't see that complaining would change things.
- To separate items in a series or list when the items themselves include commas or are long or complex
EX: The agenda included a brief introduction by the head of the committee; a talk by an invited speaker, whose work had been the subject of some controversy; a brief question-and-answer period that all expected to be lively; and a reception where those attending could interact with the speaker in a more informal manner.

Colons

- Colons denote amplification or illustration; a colon may function as a semicolon to emphasize that the second clause illustrates the first
EX: She couldn't miss the parallels between his case and hers: he, too, had had his car stolen.
- A colon must always be preceded by a complete independent clause
EX: The menu included turkey, sweet potatoes, and green beans.
Not The menu included: turkey, sweet potatoes, and green beans.
- When a colon is used to introduce a list or a single sentence, the word after it is lowercase; when a colon introduces two or more related complete sentences, the word after it is capitalized
EX: The DVD came with two extras: a poster and a booklet.
EX: She considered her options: She could leave immediately. She could hide in the bathroom until the evening was over. Or she could face down her embarrassment and stay for the end of the party.
- A colon is used to separate the main title from the subtitle of a work; in this case, the first word after the colon is always capitalized
EX: *Star Wars: A New Hope*

Hyphens & Dashes

- Although a variety of dashes are used in published works, writers will most often use **hyphens** (-), **en dashes** (—), and **em dashes** (—); em dashes are frequently referred to simply as "dashes"
- Do not put spaces around hyphens, en dashes, or em dashes
- Hyphens** join compound modifiers appearing before a noun, join some compound words, or separate words across a line; consult a dictionary or usage guide for guidance regarding hyphenation of specific compound words
- Hyphens** may also be used when certain prefixes are attached to words that do not usually have them (e.g., cross-functional) or for clarity when a prefixed word may have more than one meaning (e.g., recreate or re-create)
- The **en dash** is primarily used to connect ranges of numbers or dates (e.g., "The information you want can be found on pages 375–384."); if using an en dash, do not use *from...to* or *between...and*
EX: The years 1994–1999 were difficult ones for Silicon Valley.
EX: The years between 1994 and 1999 were difficult ones for Silicon Valley.
EX: The years from 1994 to 1999 were difficult ones for Silicon Valley.

[continued on p. 3]

TRICKY WORDS

The following is a brief list of words and usages that tend to cause confusion; when in doubt, consult a dictionary or usage guide

▪ affect; effect

- › **Affect** is usually a verb meaning "to influence" (*The cold temperatures affected the children's behavior.*); as a noun, it is a specialized term in psychology that means "mood" (*The patient's affect was depressed.*)
- › **Effect** is usually a noun that means "result" (*The budget cuts had a noticeable effect on services.*); as a verb, it means "to make happen" (*The new chief of police effected many changes to the force.*)

▪ aid; aide

- › **Aid** can be a verb meaning "to assist" (*A service dog aids people with disabilities in completing daily tasks.*); as a noun, it means "means of assistance" (*The teacher frequently used audiovisual aids in the classroom.*)
- › **Aide** is a noun meaning "helper"; it is only applied to a person, never an object (*The president's aide delivered the message.*)

▪ amid; among; between

- › In traditional usage, **between** is used to indicate a one-to-one relationship (*between you and me*), whereas **among** indicates multiple or undefined relationships (*first among equals*)
- › **Between** may also be used when context indicates the existence of multiple one-to-one relationships (*conversations between committee members*)
- › When describing position or location, **amid** is used with nouns that cannot be counted (*amid clouds of suspicion*); **among** is used with plural counted nouns (*among the fields of barley*)
- › *Amongst* and *amidst* are British forms and should be avoided in American English writing

▪ all ready; already

- › **All ready** refers to a state of preparation (*Is the team all ready to go to the game?*)
- › **Already** has to do with time, describing something that has happened in the recent past (*Has the game already started?*)

▪ all right

- › **All right** is always two words; do not use *alright* (*Are the children all right after their experience?*)
- › **All right** may be considered colloquial and should be avoided in very formal contexts

▪ all together; altogether

- › **All together** refers to the gathering of a group at a particular time and place (*The class will be all together in the auditorium.*)
- › **Altogether** means "entirely" (*The politician's excuse was altogether ridiculous.*)

▪ a lot

- › **A lot** is always two words; do not use *alot* (*There were a lot of dishes in the sink.*)
- › **A lot** is indeterminate; consider whether a more concrete descriptor would be appropriate

▪ cite; site

- › **Cite** is a verb meaning "to reference in a paper or as evidence" (*To support her argument, she cited the prior year's statistics.*)
- › **Site** is a noun meaning "place or location" (*the site of the incident*)

▪ complement; compliment

- › A **complement** is something that completes or perfects something else (*The wine complemented the meal perfectly.*); something that goes with something else is **complementary** (*The complementary study guide offers additional information not presented in the textbook.*)
- › A **compliment** is a laudatory or flattering statement (*The food critic complimented the sommelier on his choice of wines.*); something that is free is **complimentary** (*Enjoy the complimentary peanuts offered by the airline.*)
- › Both words may also be verbs; **to compliment** is to praise, whereas **to complement** is to complete or supplement

▪ discreet; discrete

- › **Discreet** means "circumspect, judicious" (*Naturally discreet, she was known for keeping secrets.*)
- › **Discrete** means "separate, unconnected" (*The process requires five discrete steps.*)

▪ farther; further

- › **Farther** is typically used to refer to physical distances (*We drove five miles farther than the directions indicated.*)
- › **Further** is reserved for figurative uses (*Let's examine the question further.*)

▪ fewer; less

- › **Fewer** should be used with counted nouns (*fewer cups of coffee*), whereas **less** is used with things that cannot be counted (*less coffee*)
- › One good rule of thumb: use **fewer** with plural nouns and **less** with singular nouns

▪ flaunt; flout

- › **Flaunt** means "to show off" (*She flaunted her newly engaged status, showing everyone the flashy ring.*)

- › **Flout** means "to treat with disdain" (*He showed no respect for authority, flouting the rules at every opportunity.*)

▪ hoard; horde

- › A **hoard** is a secret supply; it may also be used as a verb to indicate the act of creating such a supply (*My mother kept a hoard of cookies in the cupboard; she thought no one noticed her hoarding the sweets.*)
- › A **horde** is a large group of people (*The horde of fans mobbed the singer's car.*)

▪ lose; loose; loosen

- › To **lose** something is to misplace it (*Don't lose your keys!*) or be deprived of it (*By lying about her whereabouts, she lost both her father's trust and the right to use the car.*)
- › To **loose** something is to release it (*The police officer loosed the dogs, freeing them to chase the convict's scent.*)
- › To **loosen** something is to make it less restraining (*They pushed back from the table and loosened their belts.*)
- › The adjective forms are *lost*, *loose*, and *loosened*, respectively

▪ stationary; stationery

- › **Stationary** is an adjective describing a state of immobility (*A stationary bicycle may be used for exercising indoors.*)
- › **Stationery** refers to writing materials (*She always used lovely stationery for writing her thank-you notes.*)

▪ that; which; who

- › **That** is used to introduce a restrictive clause; it is not preceded by a comma (*The car that is at the curb belongs to Kate.*)
- › **Which** is used to introduce a nonrestrictive clause; it is preceded by a comma (*Kate's car, which is parked at the curb, needs to be washed.*)
- › **Who** and **whom** are used in either case if the subject of the clause is a person (*The man who stole her car is in jail.*)

▪ who; whom

- › **Who** serves as the subject of a clause (*The woman who bought the book also bought the DVD. Clifford, who bought me lunch today, has offered someone else the job.*)
- › **Whom** is the object of a verb or of a preposition (*To whom am I speaking? The man whom she saw leaving the building was apparently a burglar.*)
- › One quick way to check usage: **who** replaces *he* or *she*, whereas **whom** replaces *him* or *her*; replace **who** or **whom** with the equivalent pronoun in the sentence and check for sense (**NOTE:** You may need to change sentence order for this to work; *To whom am I speaking?* becomes *I am speaking to him.*)

QuickStudy

Em dashes can be used instead of commas or parentheses to set off an aside or explanation more strongly or to add emphasis; they should be used sparingly

EX: Her best friend—at least she thought the girl was her friend—turned her in. Most word processors have em dash and en dash characters; if you cannot find the correct symbols, indicate an em dash by typing two hyphens together and use a hyphen for an en dash

Parentheses

1. Parentheses are used to set off material from surrounding text; they offer a stronger division than commas, but not as strong as em dashes

EX: The final exam (which had to be rescheduled) was administered in the professor's dining room.

Material within parentheses does not have to bear a close grammatical relationship to the rest of the sentence, as does material set off by commas

EX: The school maintained three separate labs (chemistry, biology, and physics). **But** The school maintained three separate labs, one for chemistry, one for biology, and one for physics.

Parentheses within parentheses are sometimes allowed but should be avoided if possible; many venues prefer the use of square brackets for parentheses within parentheses

Back-to-back parentheses may be allowed if the material they enclose is entirely unrelated; consider whether the material can be enclosed in a single set of parentheses separated by a semicolon, or if the text can be restructured to avoid the back-to-back parentheses

Commas, semicolons, and colons should not precede an opening parenthesis, except when parentheses are used to set off numbers or letters in a run-in list

EX: The process's three steps, which were to (1) open the file, (2) change the file's name, and (3) save the file, were simple enough for all but the most inexperienced computer users.

Commas, semicolons, and colons may be used within parentheses if they are part of the parenthetical material; they may never fall just before the closing parenthesis

EX: Once he invited us in (reluctantly, it seemed), we saw the damage to the house.

EX: We were not eager to visit (we never had been); nevertheless, we went.

Question marks, exclamation points, and quotation marks fall inside the closing parenthesis only if they belong to the enclosed material

EX: You may feed the lions (carefully!).

A period falls inside the closing parenthesis only if the entire sentence is enclosed

EX: The new spring line was particularly vibrant. (She loved the bright colors.)

is
All items in a list should be grammatically parallel; the structure of each item in the list should be identical

Before: He went to school, to work, and did his homework.
After: He went to school and to work and did his homework.

Or He went to school, checked in at work, and did his homework.

2. Lists may be run in to a sentence or formatted vertically; reserve vertical layouts for more complex items or longer lists

Run-in lists may be introduced by a colon if the introductory phrase forms a complete sentence

EX: We have identified three types of bears: grizzly, brown, and black.

Items in run-in lists are separated by commas; use semicolons if items are long or complex or at least one of the items contains a comma itself (see **Semicolons**, p. 2)

Unless numbers are needed to indicate order or chronology, they may be omitted in run-in lists; if numerals or letters are used in a run-in list, they are usually enclosed in parentheses

Normally, vertical lists should be introduced by a complete sentence followed by a colon

Each item in a vertical list begins with a capital letter; items have no closing punctuation unless they are complete sentences

EX: Students will be tested on their understanding of four essential skills:

1. Conducting a web search
2. Assessing the reliability of a source
3. Identifying the main argument of a source
4. Integrating source material into an original work

8. An alternate structure treats the vertical list as a long sentence; in this model, the introductory phrase may be a dependent clause not ending with a colon, and each list item ends with a comma or semicolon, except the last, which terminates in a period

EX: Students will be tested on

1. their ability to conduct a web search and select appropriate sources,
2. their comprehension of the main arguments of the source,
3. their capacity to synthesize multiple sources into a single argument, and
4. their ability to integrate source material into an original work.

9. The same formatting and punctuation rules that apply to numbered lists also apply to bulleted lists; numbered lists should be reserved for occasions when sequence or number need to be emphasized

Capitalization

1. In general, CMS prefers sparing use of capitalization, sometimes referred to as "down" style

2. Proper nouns, including names of places and geographical features, are always capitalized (e.g., the Rocky Mountains, Nellie Bly, the White House)

3. Titles and honorifics are capitalized only when they immediately precede the person's name; titles are lowercased when following a name or used in place of a name

EX: Prime Minister Thatcher; the prime minister; Margaret Thatcher, the British prime minister

4. The full names of administrative and legislative bodies, departments, and offices are normally capitalized (e.g., the US Congress); however, adjectives derived from full names and generic names for such bodies are usually lowercase (e.g., congressional)

5. Adjectives derived from proper names are typically capitalized, but consult a dictionary for specific cases (e.g., Kafkaesque, Dickensian)

6. Plurals of geographic features are capitalized when they are part of a single name or used with a list of names (e.g., Rocky and Adirondack Mountains)

7. Titles of works should usually be capitalized using headline-style capitalization, which follows several rules:

A. Capitalize all major words in the title and subtitle

B. Do not capitalize *a*, *an*, or *the*, unless it is the first or last word in the title or subtitle

C. Do not capitalize prepositions unless they are used as adverbs or adjectives (e.g., *Going Down* but *Thoughts on Problem Solving*)

D. Do not capitalize *and*, *but*, *for*, *or*, or *nor*

E. Do not capitalize *to* or *as*

F. Proper names should be capitalized as they are in general usage; this includes treatment of particles such as *de* or *von*

G. Never capitalize the second part of a species name, even if it is the last word in a title

H. Capitalize both parts of a hyphenated compound, unless the second part falls under one of the other rules above

8. When periodical names are mentioned in the text, a leading *the* is not italicized or capitalized, even if it is part of the publication's official name

EX: Up until his death, Christopher Hitchens wrote literary essays for both the *Atlantic* and *Vanity Fair*.

Numbers

1. The choice of whether to spell out a number or use numerals depends on the context in which the number is used, how large the number is, and whether it is an exact number or an approximation

2. In general, for nontechnical contexts, zero through one hundred should be spelled out, as should any of those numbers followed by *hundred*, *thousand*, *million*, or similar; numbers larger than ninety-nine appear in numerals, as do complex large numbers

EX: The church is 104 years old. It holds the land for the building on a ninety-nine-year lease from the city.

EX: The history of the empire covers two thousand years.

EX: The population of the city was 1,542,000.

3. In scientific and technical contexts, single-digit numbers are spelled out and all others appear in numerals

[continued on p. 4]

AN INTRODUCTION TO GRAMMAR

Grammar is the set of rules that describes how we construct meaningful sentences; it is concerned both with defining parts of speech (noun, verb, adjective, etc.) and with describing how they are combined to make meaning (syntax)

The **clause** is the basic unit of meaning; it includes *at least* a noun and a verb (*He drives*.)

> An **independent clause** can stand alone as a complete unit of meaning (*The farmers do not complain*.)

> A **dependent clause** requires an independent clause to complete its meaning (*when it rains*)

> A **restrictive clause** is necessary to the meaning of the sentence; removing it changes or obscures the meaning (*The car that was parked at the curb has been stolen*.)

> A **nonrestrictive clause** provides additional information or description, but it can be removed without changing or obscuring the meaning of the sentence (*Ellen's car, which she bought last month, was broken into last night*.)

▪ Although there is some disagreement among grammarians, English grammar is traditionally built on eight parts of speech:

> **Nouns** name tangible or intangible things (*book, happiness*)

- **Common nouns** are generic names (*a car, a dog, a fairy tale*), whereas **proper nouns** name specific people, places, things, or titles of works (*Anne Sexton, Mount Vernon, "The Sleeping Beauty"*)

- **Count nouns** name things that can be counted and have singular and plural forms (*idea, ideas*)

- **Mass nouns**, also called **collective nouns**, name things that cannot be counted because they are abstract (*pride, evidence*) or are indistinguishable aggregates (*the middle class, the majority*) and may take singular or plural verbs, depending on context; a singular verb emphasizes the group, while a plural emphasizes individual members within the group (*The faculty protested the chancellor's policy. The faculty are all distinguished scholars who publish in reputable journals*.)

- An **appositive** is a noun or phrase that immediately follows another noun and serves to define or more completely identify the preceding noun; it may be unrestrictive, in which case it is set off with commas, or restrictive, in which case it is not (*Bono, U2's lead singer, is a great philanthropist. The singer Bono spends a lot of time advocating for poor people*.)

> **Pronouns** are words that substitute for nouns (*he, it, you, this*)

> **Adjectives** modify or describe nouns (*the wooden desk, the childlike man*)

> **Verbs** indicate action, motion, or state of being (*write, fly, exist*)

> **Adverbs** modify verbs, adjectives, or other adverbs (*She wrote fluently, although she read very slowly. We started our journey early*.)

> **Prepositions** describe relationships between two objects (*in, of, on, to*)

> **Conjunctions** connect two sentences, clauses, or words (*and, or, but, however, therefore*)

> **Interjections** are words, phrases, or clauses that indicate strong feeling (*Ouch! Well! I never! Hey, that's my backpack!*)

QuickStudy

4. Whichever rule is used, the same rules apply to ordinal numbers
EX: He was the thousandth customer.
EX: Her office was on the 102nd floor.
5. Plurals of numerals are made by adding *s*; no apostrophe is needed
EX: The students were all in their twenties.
EX: We lived in Florida during the 1990s.
6. A sentence may not begin with numerals; spell out the number or restructure the sentence
EX: Two hundred and seventeen students made the trip.
Or In the end, 217 students made the trip.
7. When several numbers appear within a paragraph, maintain consistency within categories; if one item in a category requires numerals, use numerals for all occurrences of that category
EX: The three hundred residents of the apartment building had a wide variety of pets, including 165 dogs, 120 cats, 13 gerbils, and 2 rabbits.
8. Numerals are always used to refer to divisions of a book, including page numbers, chapter numbers, volume numbers, or part numbers, as well as table and figure numbers
9. Numerals always precede *percent* or %, except at the beginning of a sentence; *percent* is preferred over %, except in scientific and technical contexts and in tables or figures where space is at a premium
10. In some technical and scientific contexts, numerals are required with units (e.g., meters, feet, square inches)
11. Years are always given in numerals, unless they appear at the beginning of a sentence; if possible, avoid beginning a sentence with a year
12. Simple fractions are spelled out and hyphenated (e.g., three-quarters, one-third); mixed fractions are generally better represented in numerals (e.g., 1½)
13. The decision to spell out or use numerals should always take readability into account; strive for consistency within the work above all

Abbreviations & Acronyms

1. **Abbreviation** refers to words that are shortened for convenience (e.g., vol. and ed.); **acronym** refers to terms drawn from the first letters of their full names and read as single words (e.g., NASA, laser, scuba, AIDS); **initialism** refers to terms constructed as acronyms but read as a series of letters (e.g., HTML, UFO, NHL); **contraction** refers to terms created from the first and last letters of the full word (e.g., Dr., Mr., amt.)
2. This guide uses “abbreviation” as an umbrella term for all of these, except where specificity is required to ensure clarity
3. Except in contexts where particular abbreviations are common, abbreviations should be avoided in running text, although they may be used to avoid excessive repetition or visual clutter if no better solution is available; they are acceptable in tables and figures
4. In all cases, keep the number of abbreviations to a minimum, as readers will quickly lose track of a large number of abbreviations; if several abbreviations are used repetitively, consider adding a list of abbreviations
5. Abbreviations such as *e.g.*, *i.e.*, and *etc.* should be restricted to parenthetical expressions, notes, and tables and charts
6. Unless they are very common, abbreviations and acronyms should be spelled out on first use, with the acronym or abbreviation appearing in parentheses after the full term; the spelled-out term should not be capitalized unless it is a proper noun
7. Keep in mind that abbreviations are context dependent; the same abbreviation may have different meanings for different audiences
8. Use periods:
 - A. With abbreviations ending in a lowercase letter (e.g., Dr., pp., et al.)
 - B. For initials within names (e.g., E. B. White, T. S. Eliot)
 - C. With traditional abbreviations for states (e.g., Ill., N.C.)
9. Do *not* use periods:
 - A. With abbreviations appearing in all capitals (e.g., VP, CEO, UK)
 - B. With academic degrees, even if they end in a lowercase letter (e.g., BA, PhD, MDiv)
 - C. With an entire name replaced by initials (e.g., JFK, MLK)
 - D. With two-letter postal abbreviations for states and provinces (e.g., VT, NC, US); CMS recommends postal abbreviations over traditional abbreviations (i.e., SD rather than S. Dak.)

10. Choose the article preceding an abbreviation based on the sound of the abbreviation, *not* the article typically required by the term that is abbreviated (e.g., “a health maintenance organization,” but “an HMO”; “an unidentified flying object,” but “a UFO”)

Quotations

1. In academic papers and other scholarly texts, quotations provide verifiable evidence so that others can see the building blocks of your argument and follow your train of thought
2. It is important to give explicit credit to quotation sources in order to avoid plagiarism, give credibility to your work, and help readers follow the trail of your argument
3. Proofread carefully to be sure quotations are accurately transcribed; do not extract quotations in such a way as to misrepresent the position of the original
4. Common knowledge or verifiable facts, proverbs, and familiar expressions need not be quoted unless the exact wording is taken from another work
5. Some minor changes—in punctuation, capitalization, and other small details—are allowed to make the quotation fit grammatically into the new context
6. Quotations are set off by double quotation marks (“ ”); quotes within quotes use single quotation marks (‘ ’)
7. An ellipsis, or three spaced periods, may be used to indicate material omitted from a quotation; in using ellipses, great care must be taken to avoid skewing the meaning of the original quotation
8. The use of a comma to introduce a quotation and the capitalization of the first letter of a quotation depend only on the context in which it appears; the capitalization may be changed to make the quotation fit into the surrounding text
9. The first letter of a quotation that is an integral part of the surrounding sentence is not capitalized
EX: John F. Kennedy believed in an ethic of service that required that a citizen “ask not what your country can do for you—ask what you can do for your country.”
Or John F. Kennedy expressed his ethic of service in this way: “Ask not what your country can do for you—ask what you can do for your country.”
10. A quotation presented with only an introductory clause will begin with a capitalized letter and be set off with a comma or colon
EX: John F. Kennedy said, “Ask not what your country can do for you—ask what you can do for your country.”
Or John F. Kennedy expressed his ethic of service in this way: “Ask not what your country can do for you—ask what you can do for your country.”
11. Longer quotations, of several lines or more, may be set off as block quotations; shorter quotations that bridge paragraphs or that require special formatting, such as poems, plays, or lists, may also be set off as block quotations
12. Introduce a block quotation with a complete sentence ending in a period or a colon; begin the quotation on a new line and indent it one inch from the left margin; do not use quotation marks to set off the block quotation, but use double quotation marks for quotations within block quotations
EX: Gogol describes how the artist produces a string of portraits depicting conventional people in conventional poses:
If a man insisted that Mars was to appear in his face, Mars appeared; those who wanted to look like Lord Byron, he painted in Byronic pose and attitude. If the ladies wanted to be shown as Corinne, Undine, Aspasia, he avidly agreed and imaginatively supplied an adequate measure of good looks, which as everyone knows can do no harm, and for the sake of which an artist may even be forgiven for any lack of resemblance. (Gogol 1842)
13. For multiparagraph quotations, always format as a block quotation and indicate subsequent paragraphs by further indenting the first line of each
14. Periods and commas always fall inside the closing quotation mark; other punctuation falls outside, unless it is part of the original quotation
15. For in-line quotations, parenthetical citations fall outside the closing quotation mark but inside closing punctuation; periods and commas follow the parenthetical citation
EX: The “struggle between the Red Men and White on the American frontier” became “the archetype and precedent for the worldwide struggle between ‘progressive’ and ‘savage’ or ‘regressive’ races that shaped the modern world” (Slotkin 1993).
16. For block quotations, parenthetical citations follow closing punctuation

Documentation

Citing Sources

1. Citation is required by copyright law, by ethical obligations to avoid plagiarism, and by courtesy to readers who may wish to reconstruct your argument
2. Direct quotations, paraphrases, and sources of facts not generally known or easily found all require citations
3. Different disciplines have different conventions for citing sources; the primary objective should be to provide sufficient information either to lead readers directly to the source or at least, for sources not readily available, to clearly identify the sources used
4. Besides CMS, other commonly used citation systems include the Modern Language Association (MLA), for languages and literatures; the American Psychological Association (APA), for social sciences; the Council of Science Editors (CSE), for hard sciences; and the Associated Press (AP), for journalists

CMS Citation Systems

1. CMS offers two different citation systems, to accommodate different needs: **author-date** and **notes and bibliography**; consult with your professor or publisher to see which you should use
2. The **author-date** system tends to be used in the sciences and social sciences and for shorter works; it is accompanied by a reference list and may be used in conjunction with substantive endnotes or footnotes
3. The **notes and bibliography** system tends to be used in the humanities and history, particularly for longer works

Special Considerations for Citing Electronic Sources

1. Sources published electronically have the same copyright protections as printed works
2. Electronic sources may raise special concerns with regard to authority and permanence; you should consider the authority and likely permanence of a source when deciding to use it as a source for your work

- Citations for electronic sources should include enough information for a reader to positively identify and, if possible, access the source; this will include much of the same information required by print sources, as well as additional electronic identifiers such as the uniform resource locator (URL, or web address) and the digital object identifier (DOI); these additional elements should be appended to the standard citation format
- Although many publishers no longer require access dates for electronic resources, student writers may be required to include that information; check with your professor
- For works available both in print and online, cite the version consulted

The Author-Date System

- The author-date system uses parenthetical references in the text, citing the author or authors of the work and the date of publication, with a matching reference list
- There must be a reference list entry for every in-text citation and vice versa; cross-check carefully and verify all entries

IN-TEXT CITATIONS

In depression, the Beck Depression Inventory-II (BDI-II) has been widely used as a self-report instrument (Hersen 2004), although it was not intended to be used in this way (Piotrowski 1996).

REFERENCE LIST ENTRIES

Hersen, Michel. 2004. *Comprehensive Handbook of Psychological Assessment: Personality Assessment*. Hoboken, NJ: Wiley.

Piotrowski, Chris. 1996. "Use of the Beck Depression Inventory in Clinical Practice." *Psychological Reports* 79:873-74.

The Reference List

- The reference list appears at the end of the work, headed by the title **References** or **Works Cited**
- Reference list entries should be double-spaced and set flush left; they may have either a first-line indent or a hanging indent; check with your professor or publisher for preferences
- The reference list entry includes full publication information, with the year immediately following the author's name; include all information necessary to help a reader find the work you have referenced
- City of publication should always be given; state, province, or country should be added if there are multiple cities with the same name (Cambridge); if the city is well known (New York) or the publisher name includes the state (University of Georgia Press), the state abbreviation is not necessary
- Titles of works are capitalized; titles of complete, self-contained works are italicized; titles of shorter works or works that are elements of other, larger works are enclosed in quotation marks
- Authors' names should follow the form given on the title page of the work or at the head of the article or chapter
- Reference list entries are alphabetized by the last name of the authors; single-author entries precede multi-author entries starting with the same name; for multi-author entries, only the first author's name is inverted
- Multiple entries by the same author or team of authors are organized by date of publication, from earliest to latest; after the first entry, the author's name is replaced by three em dashes (use six unspaced hyphens if you do not have an em dash character); multiple entries for the same year are differentiated by the addition of a, b, etc., to the year of publication

EXAMPLES

Martí, José. 1946. *Obras completas: Edición conmemorativa del cincuentenario de su muerte*. Vol. 1. Prologue by M. Isidro Méndez. Havana, Cuba: Editorial Lex.

———. 1954a. "Our America." In *The America of José Martí: Selected Writings*, translated by Juan de Onís, 138-51. New York: Funk & Wagnalls.

———. 1954b. "William F. Cody: 'Buffalo Bill.'" In *The America of José Martí: Selected Writings*, translated by Juan de Onís, 96-101. New York: Funk & Wagnalls.

- Multiple entries with the same first author but different second and subsequent authors are alphabetized by the coauthors' last names

EXAMPLES

Krueger, Robert F. 1999. "The Structure of Common Mental Disorders." *Archives of General Psychiatry* 56:921-26.

Krueger, Robert F., and Michael S. Finger. 2001. "Using Item Response Theory to Understand Comorbidity among Anxiety and Unipolar Mood Disorders." *Psychological Assessment* 13 (1): 140-51.

Krueger, Robert F., P. E. Nichol, Brian M. Hicks, Kristian E. Markon, Christopher J. Patrick, and William G. Iacono. 2004. "Using Latent Trait Modeling to Conceptualize an Alcohol Problems Continuum." *Psychological Assessment* 16 (2): 107-19.

Krueger, Robert F., and Thomas M. Piasecki. 2002. "Toward a Dimensional and Psychometrically-Informed Approach to Conceptualizing Psychopathology." *Behaviour Research and Therapy* 40 (5): 485-99.

In-Text Citations

- The in-text citation immediately follows the quoted or cited material; it includes only the last name of the author or authors and the year of publication with no internal punctuation; if the citation is to a direct quotation, the parenthetical note may also include a comma just after the year, followed by a page number (Hersen 2004, 23) or other locator to a specific portion of the work, such as chapter numbers or, for an online or other unpaginated work, paragraph or line numbers

- For up to three authors, all authors' last names are included in the citation (Smith, Jones, and Doe 2002); for four or more authors, the first author's last name is included, followed by *et al.* and the year of publication (Smith et al. 2006)
- Multiple references may be included in a single parenthetical citation; they should be separated by semicolons and may be ordered either alphabetically or chronologically as long as the ordering is consistent throughout the work
EX: A growing body of research has shown that a reliable patient-reported assessment and tracking system can also have direct clinical benefits (Lambert and Brown 1996; Wasson et al. 1999; Brodey 2005; Sapyta, Riemer, and Bickman 2005), particularly as part of a system of patient-centered care initiatives.

The Notes & Bibliography System

- The notes and bibliography system provides citation information in either footnotes or endnotes, which may be supplemented by a bibliography
- Where a bibliography is supplied, notes may use a shortened citation that includes the author's last name, shortened title, plus locator information such as a page or chapter number

CITATIONS IN NOTES

- Leland Person, *Aesthetic Headaches: Women and a Masculine Poetics in Poe, Melville, and Hawthorne* (Athens: University of Georgia Press, 1988), 24.
- Person, *Aesthetic Headaches*, 132.

BIBLIOGRAPHY ENTRY

Person, Leland. *Aesthetic Headaches: Women and a Masculine Poetics in Poe, Melville, and Hawthorne*. Athens: University of Georgia Press, 1988.

The Notes

- In the footnote or endnote, the elements are separated by commas; publication information is enclosed in parentheses, and author's names are given in standard order; the note ends with a period
- Where a bibliography is used, notes may use shortened references, giving only enough information to point readers to the correct entry in the bibliography; where no bibliography is given, the notes must include a full reference at the first mention of the work, with shortened citations allowed thereafter
- In the text, the note number is superscripted
- Note numbers should appear at the end of a sentence or clause; they follow all punctuation, except the dash, which they should precede

EX: Dramatizing what Leland Person calls "the limitations of a radically idealistic vision,"²¹ these stories betray a fundamental tension between the communicative function of art and the Romantic exaltation of the artist.

- Except in rare cases, note numbers generally follow the closing parenthesis
- Notes may also be used to provide additional commentary or peripheral discussion, but such substantive notes should be carefully regulated to avoid overloading the text

The Bibliography

- In the notes and bibliography system, the bibliography is typically titled **Bibliography**
- In the bibliography, the elements are separated by periods and publication information is not in parentheses; the first author's name is inverted for alphabetization
- Organization of the bibliography follows the same rules as the reference list in the author-date system, including the use of three em dashes (or six unspaced hyphens) to replace author names when there are several entries by the same author or authors
- Unlike in the author-date system, the year of publication appears at the end of the bibliography entry, with the other publication information

Sample References

- Note that bibliography entries differ from reference list entries only in the placement of the publication date
- Examples are provided for the most common kinds of sources; references for other sources may be created by adapting the basic guidelines demonstrated here; in all cases, the goal is to provide enough information to make it possible for a reader to identify and access the source described
- In the following examples, an in-text citation and reference list entry are provided, followed by a note, short-form note, and matching bibliography entry

Books

- Books provide the model for other sources as well; when in doubt, use the book examples as a model for other types of citations
- References to books should include the full name(s) of the author(s); the full title of the book, as well as the edition referred to (if not the first), volume number, and total number of volumes, if applicable; names of editors, compilers, or translators, in the order listed on the title page; series title and volume number; publication data (place, publisher, date); and page numbers, if referring to a chapter of a book
- For electronic books, construct the note or reference list entry like the following examples, adding the format (Kindle edition, PDF e-book, etc.) at the end of the entry for reference list entries or just before the page number or locator information in a note
- When citing the online version of a book also available in print, add the URL or DOI at the end of the reference list entry

Expert
Widely recognized
knowledge
or deciding r
1-100 C

SINGLE-AUTHOR BOOK

(Brown 2012)

Brown, Steven T. 2010. *Tokyo Cyberpunk: Posthumanism in Japanese Visual Culture*. New York: Palgrave Macmillan.

1. Steven T. Brown, *Tokyo Cyberpunk: Posthumanism in Japanese Visual Culture* (New York: Palgrave Macmillan, 2010), 124.
 2. Brown, *Tokyo Cyberpunk*, 11.
- Brown, Steven T. *Tokyo Cyberpunk: Posthumanism in Japanese Visual Culture*. New York: Palgrave Macmillan, 2010.

MULTIAUTHOR BOOK

(Christensen, Roth, and Anthony 2004)

Christensen, Clayton M., Erik A. Roth, and Scott D. Anthony. 2004. *Seeing What's Next: Using the Theories of Innovation to Predict Industry Change*. Boston: Harvard Business School Press.

3. Clayton M. Christensen, Erik A. Roth, and Scott D. Anthony, *Seeing What's Next: Using the Theories of Innovation to Predict Industry Change* (Boston: Harvard Business School Press, 2004), 112–21.
 4. Christensen, Roth, and Anthony, *Seeing What's Next*, 120.
- Christensen, Clayton M., Erik A. Roth, and Scott D. Anthony. *Seeing What's Next: Using the Theories of Innovation to Predict Industry Change*. Boston: Harvard Business School Press, 2004.

EDITED BOOK

(Kaplan and Pease 1993)

Kaplan, Amy, and Donald E. Pease, eds. 1993. *Cultures of United States Imperialism*. Durham, NC: Duke University Press.

1. Amy Kaplan and Donald E. Pease, eds., *Cultures of United States Imperialism* (Durham, NC: Duke University Press, 1993).
 2. Kaplan and Pease, *Cultures of United States Imperialism*.
- Kaplan, Amy, and Donald E. Pease, eds. *Cultures of United States Imperialism*. Durham, NC: Duke University Press, 1993.

TRANSLATED BOOK

(Gippius 1989)

Gippius, V. V. 1989. *Gogol*. Translated by Robert A. Maguire. Durham, NC: Duke University Press.

3. V. V. Gippius, *Gogol*, trans. Robert A. Maguire (Durham, NC: Duke University Press, 1989), 51.
 4. Gippius, *Gogol*, 137.
- Gippius, V. V. *Gogol*. Translated by Robert A. Maguire. Durham, NC: Duke University Press, 1989.

CHAPTER IN A BOOK

(Pease 1998, 54)

Pease, Donald E. 1998. "José Martí, Alexis de Tocqueville, and the Politics of Displacement." In *José Martí's "Our America": From National to Hemispheric Cultural Studies*, edited by Jeffrey Belnap and Raúl Fernández, 27–57. Durham, NC: Duke University Press.

1. Donald E. Pease, "José Martí, Alexis de Tocqueville, and the Politics of Displacement," in *José Martí's "Our America": From National to Hemispheric Cultural Studies*, ed. Jeffrey Belnap and Raúl Fernández (Durham, NC: Duke University Press, 1998), 29.
 2. Pease, "José Martí," 43.
- Pease, Donald E. "José Martí, Alexis de Tocqueville, and the Politics of Displacement." In *José Martí's "Our America": From National to Hemispheric Cultural Studies*, edited by Jeffrey Belnap and Raúl Fernández, 27–57. Durham, NC: Duke University Press, 1998.

NOTE: For a chapter in a single-author book, as opposed to an edited volume, use the same format but omit the editor information**Periodicals**

1. References to articles appearing in periodicals should include the full name(s) of the author(s); title and subtitle of the specific article; the title of the periodical; information about the issue in which the article appeared, including volume and issue numbers (if the periodical uses them) and date, either in addition to or instead of volume and issue numbers, if not available; the year of the article's publication; and, if appropriate, a page reference
2. For electronic periodicals, include the URL or DOI at the end of the reference list entry; electronic access dates are not required by CMS but may be required by your professor or publisher
3. Newspaper and magazine articles may be cited in running text instead of a note;

if cited in the text or a note, they are commonly omitted from the reference list or bibliography.

JOURNAL ARTICLE

(Keinonen 2008, 35)

Keinonen, Turkkka. 2008. "Design in Business: Views from the Nucleus and the Periphery." *Design Management Review* 19 (3): 30–36.

1. Turkkka Keinonen, "Design in Business: Views from the Nucleus and the Periphery," *Design Management Review* 19, no. 3 (2008): 33.
 2. Keinonen, "Design in Business," 31.
- Keinonen, Turkkka. "Design in Business: Views from the Nucleus and the Periphery." *Design Management Review* 19, no. 3 (2008): 30–36.

MAGAZINE ARTICLE

(Wasik 2012, 76)

Wasik, Bill. 2012. "#Riot: How Social Media Fuels Social Unrest." *Wired*, January, 76–83, 112–13.

3. Bill Wasik, "#Riot: How Social Media Fuels Social Unrest," *Wired*, January 2012, 80.
 4. Wasik, "#Riot," 79.
- Wasik, Bill. "#Riot: How Social Media Fuels Social Unrest." *Wired*, January 2012, 76–83, 112–13.

ONLINE NEWSPAPER ARTICLE

(Bhanoo 2012)

Bhanoo, Sindya N. 2012. "How Immersion Helps to Learn a Language." *New York Times*, April 2. Accessed April 4, 2012. http://www.nytimes.com/2012/04/03/science/how-immersion-helps-to-learn-a-new-language.html?_r=1&ref=science.

1. Sindya N. Bhanoo, "How Immersion Helps to Learn a Language," *New York Times*, April 4, 2012, accessed April 2, 2012, http://www.nytimes.com/2012/04/03/science/how-immersion-helps-to-learn-a-new-language.html?_r=1&ref=science.
 2. Bhanoo, "How Immersion Helps to Learn a Language."
- Bhanoo, Sindya N. "How Immersion Helps to Learn a Language." *New York Times*, April 2, 2012. Accessed April 4, 2012. http://www.nytimes.com/2012/04/03/science/how-immersion-helps-to-learn-a-new-language.html?_r=1&ref=science.

Websites & Blogs

1. Websites that are merely mentioned need not be cited or included in the reference list, although they may be included in notes; include in the reference list only websites whose content provides support for your argument
2. Include, if it can be found, the website's publication date or date of last revision; if the date cannot be found, include date of access
3. An entry for a website should include both the owner or site sponsor and the author; if no author is given, the site owner or sponsor stands in for the author
4. Website titles are generally set in roman (not italics) with title capitalization, but titles that are similar to books or other such publications may be in italics; sections or pages within a website are enclosed in quotation marks; blog titles are analogous to periodical titles and so are set in italics

WEBSITE

(Wikipedia 2012)

Wikipedia. 2012. "History of Patent Law." Last modified March 22. https://secure.wikimedia.org/wikipedia/en/wiki/History_of_patent_law.

1. "History of Patent Law," *Wikipedia*, last modified March 22, 2012, https://secure.wikimedia.org/wikipedia/en/wiki/History_of_patent_law.
 2. "History of Patent Law," *Wikipedia*.
- Wikipedia. "History of Patent Law." Last modified March 22, 2012. https://secure.wikimedia.org/wikipedia/en/wiki/History_of_patent_law.

BLOG ENTRY

(Lindegard 2011)

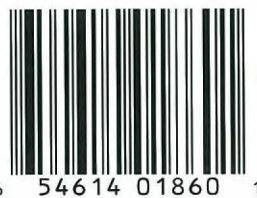
Lindegard, Stefan. 2011. "Open Innovation and Intellectual Property Rights." *Innovation Excellence* (blog), April 16. <http://www.innovationexcellence.com/blog/2011/04/16/open-innovation-and-intellectual-property-rights/>.

1. Stefan Lindegard, "Open Innovation and Intellectual Property Rights," *Innovation Excellence* (blog), April 16, 2011, <http://www.innovationexcellence.com/blog/2011/04/16/open-innovation-and-intellectual-property-rights/>.
 2. Lindegard, "Open Innovation and Intellectual Property Rights."
- Lindegard, Stefan. "Open Innovation and Intellectual Property Rights." *Innovation Excellence* (blog), April 16, 2011. <http://www.innovationexcellence.com/blog/2011/04/16/open-innovation-and-intellectual-property-rights/>.

U.S. \$5.95

Author: MaryAnne Gobble

free downloads &
hundreds of titles at
quickstudy.com



6 54614 01860 1

Customer Hotline # 1.800.230.9522

ISBN-13: 978-142321860-9

ISBN-10: 142321860-4



9 781423 218609



5 0595

Note to Student: This guide is intended to be an annotated outline/review of key rules within the *Chicago Manual of Style* (16th edition) and is intended for informational purposes only. Due to its condensed format, this guide cannot cover every aspect of the CMS guidelines to which it refers. BarCharts, Inc., its writers, editors, and design staff are not responsible or liable for the use or misuse

All rights reserved. No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission from the publisher. MADE IN THE USA © 2012 BarCharts, Inc. 0512