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| ***Techniques for Documenting with Proof or Supporting Evidence, and Related Strategies for Problem Solving***  **By David Alderoty © 2016**  **Chapter 13) Technique-11, Reasoning Based on Cause-and-Effect, and Related Concepts**  [**This e-book presents 28 techniques for supporting the validity of the statements you write**](http://www.TechForText.com/DP/List)**.**  **Left click on the above for a list of the techniques**  **This chapter contains a little over 3,400 words**  **If you want to go to chapter 12, left click on the following link:**  [**www.TechForText.com/DP/chapter-12**](http://www.TechForText.com/DP/chapter-12)  **To contact the author use David@TechForText.com**  [**or left click for a website communication form**](http://www.david100.com/Mail)  **Table of Contents, and an Outline of this Chapter**  The following is a hyperlink table of contents, as well as an outline of this chapter. If you left click on a blue underlined heading, the corresponding topic or subtopic will appear on your computer screen. Alternatively, you can scroll down to access the material listed in the table of contents, because this chapter is on one long webpage.  [Topic 1.) Technique 11) Reasoning Based on Cause-and-Effect 4](#_Toc468835393)  [**Subtopic, What is a Cause-and-effect Sequence** 6](#_Toc468835394)  [**Subtopic, Types of Cause-and-Effect Sequences** 6](#_Toc468835395)  [**Subtopic, A Cause-and-Effect Sequence Involving Multiple Causes and/or Multiple Outcomes** 9](#_Toc468835396)  [**Additional and Supporting Information for This Subtopic, from Web-Based Sources** 10](#_Toc468835397)  [Topic 2.) Energy and Cause-and-Effect Sequences 11](#_Toc468835398)  [**Subtopic, Exergonic Cause-and-Effect Sequences, Release Energy** 12](#_Toc468835399)  [**Subtopic, Endergonic Cause-and-Effect Sequences, Require an Input of Energy** 13](#_Toc468835400)  [**Subtopic, Cause-and-Effect Sequences Can Build Structure or Destroy Structure, which Generally Involves the Input or Output of Energy** 14](#_Toc468835401)  [Topic 3.) Explaining a Phenomena in Writing With Cause-and-Effect Sequences 17](#_Toc468835402)  [**Subtopic, Writing about Cause-and-Effect Sequences in Terms of: 1‑UNDERLYING DYNAMICS, 2-a THEORY or a HYPOTHESIS, 4-OBSERVABLE BEHAVIOR** 17](#_Toc468835403)  [Topic 4.) Explaining Phenomena with a Cause‑and‑Effect‑Sequence, Involving Mechanics versus Hypothetical Cause‑and‑Effect Simulation Models 18](#_Toc468835404)  [**Subtopic, An Explanation Based on a: *Cause‑and‑Effect‑Sequence, Involving Mechanics, Using*Gas Pressure in a Closed Vessel as an Example** 18](#_Toc468835405)  [**Subtopic, An Explanation Based on: *A Hypothetical Cause‑and‑Effect Simulation Model,* Using Gravity as an Example** 20](#_Toc468835406)  [**Subtopic, A Note on The Hypothetical Simulation Model Presented Above** 21](#_Toc468835407)  [**Web-Based Articles for Additional and Supporting Information, that Relates to this Chapter** 22](#_Toc468835408)  [**Web-Based Videos for Additional and Supporting Information for the Material Presented in this Topic** 24](#_Toc468835409)  **This E-Book Provides Additional and Supporting Information from other Authors, with Web Links**  This e-book contains links to web-based articles and videos from other authors, for **additional, alternative, and supporting information.** The links are the blue underlined words, presented throughout this e-book. However, some of these links are to access different sections of this e-book, or material on my own websites.  Quotes and paraphrases in this e-book have hyperlinks to access the original source. The quotes are presented in brown text, which is the same color of these words. (The precise text color is RGB Decimal 165, 42, 42, or Hex #a52a2a)  Some of the web links in this e-book will probably fail eventually, because websites may be removed from the web, or placed on a new URL. If a link fails, use the blue underlined words as a search phrase, with [www.Google.com](http://www.google.com/) If the link is for a video, use [www.google.com/videohp](http://www.google.com/videohp) The search will usually bring up the original website, or one or more good alternatives. |

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| ***For those who prefer listening, as an alternative to reading, this book is recorded in an audio format.***  [***For an audio narration of topic-1, left click on these words (requires 9 minutes, and 58 seconds).***](P1.mp3)  [***For an audio narration of topic-2, left click on these words (requires 6 minutes, and 40 seconds).***](P2.mp3)  [***For an audio narration of topic-3, left click on these words (requires 2 minutes, and 20 seconds)***](P3.mp3)***.***  [***For an audio narration of topic-4, left click on these words (requires 8 minutes, and 21 seconds).***](P4.mp3) |

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| **Topic 1.) Technique 11) Reasoning Based on Cause-and-Effect**  |||  **Technique-11, is reasoning based on cause-and-effect.** This involves problem solving, studying, and/or explaining phenomena, **in terms of one or more cause-and-effect sequences**. This can involve the cause-and-effect sequences that relate to a disease, an accident, geophysical event, a chemical reaction, historical event, failures, successful outcomes, etc.  The functioning of most, if **not** all, technological devices can be explained in terms of cause-and-effect sequences. This includes the steps or sequences involved with the functioning of: steam engines, internal combustion engines, jet engines, electric motors, computers, software, refrigerators, washing machines, etc.  Plants, animals, and the human body, involve a large number of cause-and-effect sequences that take place simultaneously. Most of these ***sequences directly or indirectly influence each other,*** which is typical of a complex system.  Social and psychological phenomena also involve complex systems. These systems are also comprised of cause-and-effect sequences that directly or indirectly influence each other. Social cause-and-effect sequences, may influence psychological sequences, and vice a versa. In addition, psychological sequences can influence biological cause-and-effect sequences. All of this suggests that humans and their social dynamics represent very complex systems.  Reasoning based on cause-and-effect, can also involve explaining how a problem occurred in terms of one or more sequences. This may suggest a solution to the problem, by reversing the steps of the sequences, or by preventing the recurrence of the problematic sequences.  A detailed description of cause-and-effect sequences, with related mechanics, is presented in the following paragraphs with examples. This will also include how cause-and-effect can be useful in explaining concepts in writing.  **Subtopic, What is a Cause-and-effect Sequence**  |||  The easiest way to understand what a cause-and-effect sequences, is to set up a row of dominoes 1 inch apart. If the first domino is pushed towards the other dominoes, a chain reaction will occur. This involves the first domino, pushing over the second domino, the second domino pushing over the third domino, etc. This simple idea is shown very dramatically in the following video: [500,000 Dominoes - The Year in Domino - 3 Guinness World Records](https://www.youtube.com/watch?v=VAqGcLaE5II).  A row of dominoes toppling each other one after the other, is a very simple sequence. Most cause-and-effect sequences are more complex, which will become apparent after you read the following subtopic.  **Subtopic, Types of Cause-and-Effect Sequences**  |||  There are many types of cause-and-effect sequences. Presented below there are a four examples represent symbolic form:   * **A**→**B This is** same a **A causes B**: This is the simplest cause-and-effect sequence. For example, if you strike a piece of glass with a hammer, it breaks into pieces. * **A→B→C→D…Same a A causes B, and B causes C, and C causes D, etc.** This is a linear chain reaction, such as the row of tumbling dominoes described above. This reaction is shown in the following video using six mousetraps: [FAST! Mouse Trap Linear Chain Reaction](https://www.youtube.com/watch?v=5DCP-K4R6XE) * **A→B and C, and then B →D→E**→**F… and C**→**G**→**H**→**I… This is** same a **A cause B and C, and then B cause D, and D causes E, E causes F etc. and C causes, G, and G causes H, and H causes I etc.** This is a linear chain reaction, which starts two other linear chain reactions. * I am calling this a nonlinear chain reaction, and it roughly approximates a nuclear reaction, and the spread of a forest fire. The above is displayed as a perfect geometric progression, where the number of reacting entities is equal to In a real situation, a more precise representation would be **Nx.** As the quantity of fuel and its density declines the value of **N** and **X** would decline.   The letters used in the above examples, can represent similar or dissimilar, steps comprising a cause-and-effect sequence. For example, with a row of dominoes, **A, B, C, D, E, F, G, H, and I,** represent similar reactions, where one domino, causes the next domino to fall over. However, if **A, B, C, D, E, F, G, H, and I,** represent the steps of the cause-and-effect sequence that takes place in an automobile engine, each letter represents a different type of step. For example, **A** can represent the intake of air, **B**, can represent the mixing of the air and gasoline, **C** can represent the firing of a spark plug, etc.  **The reactions represented by A, B, C, D, E, F, G, H, and I,** might be ***endothermic or* e*xothermic*. *Endothermic means a reaction that requires a continuous input* of energy.** A good example is the cause-and-effect sequence that takes place in an automobile engine. The combustion of gasoline provides the continuous input of energy. **E*xothermic, means a reaction that releases potential energy, and does not require a continuous input of energy to take place*.** A good example of an exothermic cause-and-effect sequence is a row of tumbling dominoes, as seen in this online video: [WORLD RECORD - Domino - Biggest / Longest Squiggle Line.](https://www.youtube.com/watch?v=r7B72yvVw2Y) Endothermic and exothermic cause-and-effect sequences are discussed in detail and **topic-2.**  **Subtopic, A Cause-and-Effect Sequence Involving Multiple Causes and/or Multiple Outcomes**  |||  Many types of phenomena have more than one cause. For example, many factors cause or contribute to automobile accidents, such as drunk driving, drivers with inadequate sleep, driver distraction from cell phones, adverse weather conditions, and defective automobile design.  Some cause-and-effect sequences have more than one outcome. For example, an accident is likely to have multiple adverse outcomes, such as temporary or permanent disability, death, financial problems because of inability to work, medical costs, and grief stricken relatives.  The complex systems that involve social, psychological, and biological dynamics are likely to have cause-and-effect sequences with multiple outcomes, and outcomes with multiple causes. Below there are symbolic representations of the above:   * **A+B…→C** Two or more factors that produce one result * **A+B…→C…** Two or more factors that produce one or more outcomes * **A+B… and contributing factors C…→D** Two or more factors that produce a single outcome, which can be facilitated by one or more other factors. * **A+B…→C+D…** Two or more factors that cause two or more outcomes   **Additional and Supporting Information for This Subtopic, from Web-Based Sources**  |||  Presented below there are a number of web-based articles that involve the causes of specific social problems, and multiple adverse impacts on society.  [The Causes of War and Those of Peace](https://www.theobjectivestandard.com/2014/10/causes-war-peace/)  [The Reasons for Wars – an Updated Survey Matthew O. Jackson and Massimo Morelli Revised: December 2009](http://web.stanford.edu/~jacksonm/war-overview.pdf)  [THE CONSEQUENCES OF WAR, by Thomas Hurka, University of Toronto](https://thomashurka.files.wordpress.com/2014/02/consequences-of-war.pdf)  [The Consequences of War: A Veteran’s Story, Glenna Tinney](http://www.justicepolicy.org/news/3753)  [What are Causes of Global Poverty?](http://borgenproject.org/what-causes-global-poverty/)  [What causes poverty?](http://cpag.org.uk/content/what-causes-poverty)  [Poverty as a Social Problem](http://cec.vcn.bc.ca/cmp/modules/emp-pov.htm)  [Effects of Poverty on Society, Children and Violence](http://www.poverties.org/blog/effects-of-poverty)  [Consequences of Poverty](http://povertyhci.weebly.com/consequences-of-poverty.html)  [The Consequences of Poverty for Children and the Nation](http://www.aecf.org/blog/the-consequences-of-poverty-for-children-and-the-nation)  [What are the Main Causes of Racism?](http://catholicismandracism.weebly.com/causes-and-effects-of-racism.html)  [Causes of Prejudice](http://www.encyclopedia.com/social-sciences/news-wires-white-papers-and-books/causes-prejudice)  [Psychological Causes and Consequences of Racism, Racial Discrimination, Xenophobia and Related Intolerances](http://www.apa.org/pi/oema/programs/racism/un-conference-plenary.aspx)  [Racism Causes Poverty](http://ic.galegroup.com/ic/ovic/ViewpointsDetailsPage/DocumentToolsPortletWindow?displayGroupName=Viewpoints&jsid=732dfd18cf9230a16181221b1dd06881&action=2&catId=&documentId=GALE%7CEJ3010159279&u=oak30216&zid=d69f8c2dcb2375a6963eeaa4eda9253e)  [Racism and the Health of the Public](https://www.bu.edu/sph/2015/05/03/racism-and-the-health-of-the-public/)  [Top 10 Causes of Crime](http://topyaps.com/top-10-causes-of-crime)  [What Causes Crime? Don Weatherburn](http://www.bocsar.nsw.gov.au/Documents/CJB/cjb54.pdf)  [Economic and Social Effects of Crime](http://law.jrank.org/pages/12125/Economic-Social-Effects-Crime.html)  [The effects of crime on society, Dave Avran](http://www.freemalaysiatoday.com/category/opinion/2012/11/10/the-effects-of-crime-on-society/) |

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| **Topic 2.) Energy and Cause-and-Effect Sequences**  |||  Cause-and-effect sequences always involve energy. However, some cause-and-effect sequences release energy, and some require a continuous input of energy. This often involves an input or output of one or more of the following: mechanical energy, heat, electricity, electromagnetic radiation, such as light, radio waves, and x-rays. This is explained in more detail in the following subtopics.  **Subtopic, Exergonic Cause-and-Effect Sequences, Release Energy**  |||  Generally, cause-and-effect sequences require energy to carry out the sequence. ***However, some cause-and-effect sequences release enough energy to maintain the sequence.*** **This is because they contain potential energy before the sequence starts.** I am calling the cause-and-effect sequences that release energy [exergonic](http://study.com/academy/lesson/exergonic-reaction-definition-example-quiz.html), which is terminology I barred from chemistry. Note **potential energy in chemistry is usually called free energy.**  A simple example of an exergonic cause-and-effect sequence can be illustrated with a row of **dominoes, placed in the upright position.** Each domino contains potential energy because of its upright position and gravity. If the first dominoes toppled over, it releases enough energy to topple the second domino, which will release enough energy to topple the third domino, etc. With a row of dominoes in the upright position, there is enough energy to maintain the sequence, until all of the dominoes tumble over. This can be seen in the following three online videos:   * [275,000 Dominoes, Most dominoes toppled in a spiral)](https://www.youtube.com/watch?v=1QtdPfz_faM) * [Largest Toppling Dominoes](https://www.youtube.com/watch?v=8yYWILv91YU) * [DOMINOES Copenhagen, Metropolis Festival 2013](https://www.youtube.com/watch?v=HMc3fvm7m7s)   However, some cause-and-effect sequences release more energy than is necessary to maintain the sequence. In such a case, there is a large amount of energy released into the environment. Some examples are burning gasoline, uranium 235 in a nuclear reaction, and TNT when it is ignited.  Usually, [exergonic](http://study.com/academy/lesson/exergonic-reaction-definition-example-quiz.html) cause-and-effect sequences require some input of energy to start the sequence. For example, to tumble a row of dominoes, there must be an input of energy to push the first domino. Other examples are gasoline, coal, and firewood, which require a small input of energy to start combustion.  **Subtopic, Endergonic Cause-and-Effect Sequences, Require an Input of Energy**  |||  Some cause-and-effect sequences require a continuous **input** **of energy** to maintain the sequence. One of the simplest examples of a cause-and-effect sequence that requires a continuous input of energy takes place in a steam engine. With this example, the energy usually comes from burning a combustible substance and in some cases, from a nuclear reactor. Similarly, the cause-and-effect sequence associated with internal combustion engines, and electric motors, require an input of energy, such as from gasoline, or electricity. In general, engines require a continuous input of energy, to create cause-and-effect sequences that involve mechanical movements.  Some chemical cause-and-effect sequences, (which are generally called chemical reactions) require an input of energy to take place. Some examples of chemicals produced by green plants, which require a continuous input of energy, are sugars, starches, cellulose, and amino acids. This energy ultimately comes from the sun. Animals produce proteins, and bone and body structures, which require a continuous input of energy, which comes from food.  **Subtopic, Cause-and-Effect Sequences Can Build Structure or Destroy Structure, which Generally Involves the Input or Output of Energy**  |||  Cause-and-effect sequences, can build structure, or destroy it. For example, when plants generate cause-and-effect sequences to create sugars, starches, roots, stems, and leaves, they are building structure. When a row of dominoes is pushed over, the resulting cause-and-effect sequence destroys structure, which can be seen dramatically in the following video: [128,000 Dominoes, 2 Guinness World Records](https://www.youtube.com/watch?v=dLRjiiAawGg).  Structure often contains potential energy, and when it does, destroying it generally releases the energy. Thus, cause-and-effect sequences that destroy such structure release energy. These sequences are exergonic. Cause-and-effect sequences that build structure generally required a continuous input of energy. These sequences are endergonic.  Note, not all structures contain potential energy. For example, this e-book contains a tremendous amount of structure, but it does not contain potential energy. If you destroy it, such as by scrambling the words, or pressing the delete button, no energy will be released. In fact, energy would be required to destroy the structure of this book.  The amount of potential energy contained in a structure, does not necessarily relate to the amount of energy used to create the structure. For example, this e-book contains no potential energy, but it contains a great deal of structure, which required a great deal of energy to create.  The energy necessary to build a specific structure generally comes from destroying another structure that has potential energy. For example, a predatory animal might destroy a smaller animal for food, which the predatory animal will used to create its own structure. Some animals obtain energy by destroying the structure of plants, which they used to build their structure. In the case of green plants, the energy source obviously is sunlight, which ultimately is the result of the destruction of atomic structures on the sun.  The process described above, of course also applies to technology created by human beings. For example, an automobile engine obtains energy, by destroying the structure of gasoline in the combustion process. Steam engines, obtain energy by destroying the structure of firewood or coal. |

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| **Topic 3.) Explaining a Phenomena in Writing With Cause-and-Effect Sequences**  |||  Explaining phenomena in terms of cause-and-effect sequences can be a very effective writing strategy, in many situations. This is assuming that the cause-and-effect sequence is relevant to your readers. For example, if you are writing a brief weather report, for a general audience, your readers might **not** be interested in the related cause-and-effect sequences. However, if you were writing the report for students studying meteorology the cause-and-effect sequences would be relevant to your readers. In general, documents based on cause-and-effect explanations or arguments are useful for science, engineering, accident reports, for explaining problems, and successful or unsuccessful results.  **Subtopic, Writing about Cause-and-Effect Sequences in Terms of: 1‑UNDERLYING DYNAMICS, 2-a THEORY or a HYPOTHESIS, 4-OBSERVABLE BEHAVIOR**  |||  Ideally, your cause-and-effect explanations or argument should be based on the actual underlying mechanics of the phenomena you are presenting in your document. This is easy to achieve, if you are writing about a cause-and-effect sequence that was created by humans, such as a row of tumbling dominoes, or a technological device. When this is **not** the case, the true underlying mechanics and dynamics of a cause-and-effect sequence may be unknown, or only partly understood. This can happen frequently in chemistry, physics, biology, and astronomy. In such a case, a theoretical, or hypothetical, cause-and-effect sequence might be of value.  Another alternative is to represent the cause-and-effect sequence, based on observable behavior. For example, when **A** occurs, **B** always follows, this leads to an assumption that may be true or false which is **A** causes **B**. A more complex example is when **A, B,** and **C,** occur, **W, X, Y,** and **Z** follows. This can lead to the assumption that **A, B,** and **C,** causes **W, X, Y,** and **Z,** which may be true or false. |

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| **Topic 4.) Explaining Phenomena with a *Cause‑and‑Effect‑Sequence, Involving Mechanics versus*  Hypothetical Cause‑and‑Effect Simulation Models**  |||  When the underlying cause-and-effect sequences of phenomena are unknown, it may be feasible, and very interesting to explain it in terms of a hypothetical simulation model. To illustrate this idea precisely, I will use the pressure produced by a gas in a closed vessel, and gravity, as examples. The underlying cause-and-effect sequences, in terms of dynamics and mechanics of a gas in the closed vessel are known. However, this is **not** the case with gravitational attraction. We of course understand gravitational attraction on a behavioral, mathematical, and theoretical level. However, we cannot explain the related cause-and-effect sequences, of gravitational attraction in terms of mechanics. To illustrate the concept, I will present a brief cause-and-effect explanation of gas pressure, and the following subtopic. This will be followed by a hypothetical simulation cause-and-effect explanation of gravity.  **Subtopic, An Explanation Based on a: *Cause‑and‑Effect‑Sequence, Involving Mechanics, Using*Gas Pressure in a Closed Vessel as an Example**  |||  We can easily explain the pressure of a gas in a closed vessel, in terms of ***a cause-and-effect-sequence involving mechanics***. Specifically, the pressure is the result of moving particles, (called molecules) colliding with the walls of the vessel. If we slow down the average speed of the molecules, which can be [done by lowering the temperature](https://www.reference.com/science/temperature-affect-kinetic-energy-gas-molecules-b44457a1ec3f3596), the pressure drops. We can also increase the average speed of the molecules, by raising the temperature, which of course will increase the pressure.  We can prove that the molecules are moving, by introducing fine dust particles into the vessel. When this is done, the dust particles will be randomly bombarded by the moving gas molecules, which will result in tiny random movements of the dust particles. This of course is a well-known phenomenon, known as [Brownian motion](https://www.britannica.com/science/Brownian-motion). See [video Brownian Motion](https://www.youtube.com/watch?v=hy-clLi8gHg) and [video Brownian motion Audiopedia](Brownian%20motion).  An alternative proof that the molecules are moving can be seen by introducing smoke into the vessel. The smoke will be pushed around by the moving gas particles, and it will eventually spread homogeneously throughout the vessel. If the molecules comprising the gas and the smoke are slowed down, by lowering the temperature, the smoke will require more time to diffuse throughout the vessel. If the speed of the molecules comprising the gas and the smoke are increased, by raising the temperature, the rate of diffusion will also increase.  **Subtopic, An Explanation Based on: *A Hypothetical Cause‑and‑Effect Simulation Model,* Using Gravity as an Example**  |||  The previous subtopic, contained an explanation of gas pressure in a closed vessel, based on a cause-and-effect sequence, involving mechanics. We cannot explain gravity in this way, because the underlying mechanics are unknown. However, we can create a cause-and-effect simulation model based on the way gravity behaves. For the hypothetical simulation model, let us imagine that there are very tiny particles moving in space in all directions. These particles would be much smaller than the subatomic particles that can be detected in a cloud chamber. These particles very rarely collide with each other, because they are extremely small. If a stone is floating in interstellar space, it will be bombarded in all directions by these tiny particles. Thus, the net force from the moving particles on the stone will be zero. However, if we place a planet near the stone, some of the moving particles will be blocked by the planet. As a result, there will be an unbalanced force on the stone attracting it toward the planet. The unbalanced force would be stronger, if the planet is very massive, because it will block a larger percentage of particles, from one direction. If the planet has a very low mass, it will block a smaller percentage of particles from one direction, and the unbalanced force on the stone will be weaker.  **Subtopic, A Note on The Hypothetical Simulation Model Presented Above**  |||  The above of course is a hypothetical simulation model, created for **illustration purposes.** Thus, it might **not** represent the true underlying mechanics that produce gravity. However, it could be evaluated experimentally, a number of ways. For example, based on this model, protons and neutrons would be bombarded randomly by the tiny particles that produce gravity. This would result in random movements, or vibrations of the protons and neutrons, similar to Brownian movements of molecules. (It is generally accepted that subatomic particle move randomly or vibrate, but this does not imply that the above is the true cause of these movements.)  Entities with extremely high densities, such as the proton, would **not** allow any of the tiny particles to pass through them, in spite of their very low mass. As a result, highly dense particles such as protons would produce an attractive force. Matter with ordinary levels of density, would of course allow most of the gravity particles to pass through their mass with very little interference.  **Web-Based Articles for Additional and Supporting Information, that Relates to this Chapter**  |||  [What are ultimate and proximate causes?](https://www.reference.com/science/ultimate-proximate-causes-bbbd90fd86f789f3)  [Ultimate cause, PHILOSOPHY AND BEHAVIOUR, Britannica](https://www.britannica.com/topic/ultimate-cause)  [Evolutionary Theory and the Ultimate–Proximate Distinction in the Human Behavioral Sciences, by Thomas C. Scott-Phillips, and others](http://pps.sagepub.com/content/6/1/38.full)  [Root Causes and Impacts of Severe Accidents at Large Nuclear Power Plants](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3606704/)  [Causes of Incidents and Accidents, involving Aviation](https://www.nap.edu/read/6265/chapter/5)  [Accident Investigation: Back to Reality](http://ehstoday.com/news/ehs_imp_32816)  [Accident investigation techniques](https://www.healthandsafetyatwork.com/content/accident-investigation-techniques)  [Investigating "Causes" and Assigning "Blame" by Ira J. Rimson, P.E.; Forensic Engineer](http://www.iprr.org/papers/rimsona&mpaper.htm)  [Causes and Effects of the Rapid Sinking of the Titanic, by Vicki Bassett](http://writing.engr.psu.edu/uer/bassett.html)  [How do accidents happen? A study of more than 700,000 crashes in the UK has produced detailed evidence on the causes of road traffic accidents.](http://www.telegraph.co.uk/motoring/road-safety/8702111/How-do-accidents-happen.html)  [How to Write a Cause-and-effect Essay](https://blog.udemy.com/how-to-write-a-cause-and-effect-essay/)  [Cause-and-effect Essay](http://essayinfo.com/essays/cause_and_effect_essay.php)  [WRITING CAUSE-AND-EFFECT PAPERS](https://www.butte.edu/departments/cas/tipsheets/style_purpose_strategy/cause_effort.html)  [Cause-and-effect Paragraphs](http://lrs.ed.uiuc.edu/students/fwalters/cause.html)  [Cause-and-effect Topics](http://www.plagtracker.com/cause-effect-essay.html)  [How to Write a Cause-and-effect Essay on any Topic](http://www.scoolwork.com/EssayWritingGuide/how_to_write_cause_effect_essay_on_any_topic.aspx)  [Cause & effect essays](http://www.eapfoundation.com/writing/essays/cande/)  [The Law of Cause-and-effect Dominant Principle of Classical Physics](http://www.commonsensescience.org/pdf/articles/law_of_cause_and_effect_fos_v7n3_causality.pdf)  [Cause-and-effect, By W. Daniel Hillis](https://www.edge.org/response-detail/25435)  [How to Write a Good Accident or Incident Report, by Jack Benton](https://www.linkedin.com/pulse/20140415203141-5310498-workplace-safety-how-to-write-a-good-accident-or-incident-report)  [4 Steps for Writing an Effective Accident Report By Chris Rode](http://www.assuranceagency.com/blog-post/4-steps-for-writing-an-effective-accident-report)  [Writing Effective Incident Reports](http://www.firebelleproductions.com/newsletters/ReportWriting.pdf)  **Web-Based Videos for Additional and Supporting Information for the Material Presented in this Topic**  |||  [How To Write A Cause-and-effect Essay: topics, outline, statement](https://www.youtube.com/watch?v=LXe25U_9oi8)  [Cause-and-effect Essays](https://www.youtube.com/watch?v=Qtk863fFEiE)  [How to Write a Cause-Effect Essay, by David Taylor](https://www.youtube.com/watch?v=9ROJwIZHC2w)  [Cause-and-effect language](https://www.youtube.com/watch?v=Txx8H4eG2GE)  [How To Write An Incident Report, by Rutgers ResKnights](https://www.youtube.com/watch?v=qsqtxRa3zXI)  [Accident and Incident Reports, Karelia Stetz-Waters](https://www.youtube.com/watch?v=dSGmcTRNe58)  [Accident Reporting, Plumbing Council](https://www.youtube.com/watch?v=80dLVf_cpTA)  [Incident Report Practice Video](https://www.youtube.com/watch?v=nnCu-e2q-YI)  **If you want to go to chapter 14 of this e-book, left click on the following link:**  [**www.TechForText.com/DP/chapter-14**](http://www.TechForText.com/DP/chapter-14) |