# Index

[Definitions 2](#_Toc297379851)

[Resolved 3](#_Toc297379852)

[The 4](#_Toc297379853)

[USFG 5](#_Toc297379854)

[Should is mandatory 6](#_Toc297379855)

[Should is not mandatory 7](#_Toc297379856)

[Substantially 8](#_Toc297379857)

[Increase generic 9](#_Toc297379858)

[Increase is pre-existing 10](#_Toc297379859)

[Increase is not pre-existing 11](#_Toc297379860)

[Its 12](#_Toc297379861)

[Space Exploration 1/3 13](#_Toc297379862)

[Exploration 16](#_Toc297379863)

[And/Or 17](#_Toc297379864)

[Space Development 1/2 18](#_Toc297379865)

[Development 20](#_Toc297379866)

[Beyond 21](#_Toc297379867)

[Mesosphere 22](#_Toc297379868)

[ISS 23](#_Toc297379869)

[Violations 24](#_Toc297379870)

[Continuation/Replacement is not topical 25](#_Toc297379871)

[Development = Peaceful 26](#_Toc297379872)

[Increase = Pre-existing 27](#_Toc297379873)

[Exploration = physical, not research 28](#_Toc297379874)

[T- Substantial (SBSP Aff) 29](#_Toc297379875)

# Definitions

## Resolved

### Resolved is a firm decision

The New Oxford American Dictionary 2005 "resolution n” , second edition. Ed. Erin McKean. Oxford University Press, 2005. Oxford Reference Online. Oxford University Press. http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t183.e65284

a firm decision to do or not to do something: she kept her resolution not to see Anne any more a New Year's resolution

### Resolved a formal showing of intent based on a committee vote

The New Oxford American Dictionary, 2005 "resolution n”, second edition. Ed. Erin McKean. Oxford University Press, 2005. Oxford Reference Online. Oxford University Press. http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t183.e65284

a formal expression of opinion or intention agreed on by a legislative body, committee, or other formal meeting, typically after taking a vote: the conference passed two resolutions. • the quality of being determined or resolute: he handled the last French actions of the war with resolution.See note at courage.

### Resolved is to take action

The New Oxford American Dictionary, 2005"resolution n." , second edition. Ed. Erin McKean. Oxford University Press, 2005. Oxford Reference Online. Oxford University Press. http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t183.e65284

the action of solving a problem, dispute, or contentious matter: the peaceful resolution of all disputes | a successful resolution to the problem

## The

### The denotes a reference to a group as a whole

Merriam-Webster ’11 (2011, <http://www.merriam-webster.com/dictionary/the>)

Used as a function word before a noun or a substantivized adjective to indicate reference to a group as a whole

### The means particular or unique.

Merriam-Webster ’11 (2011, <http://www.merriam-webster.com/dictionary/the>)

b —used as a function word to indicate that a following noun or noun equivalent is a unique or a particular member of its class <the President>

### The should be understood generically.

Merriam-Webster ’11 (2011, <http://www.merriam-webster.com/dictionary/the>)

used as a function word before a singular noun to indicate that the noun is to be understood generically

## USFG

### United States Federal Government is the central government in Washington D.C.

West’s Legal Thesaurus/Dictionary. 1985, (p. 744. (MHHAR7000))

United States; usually means the federal government centered in Washington, DC

### United States Federal Government is all 3 branches

Wordnet 2000 (cognitive science laboratory p. online http://wordnet.princeton.edu/perl/webwn?s=united%20states)

United States government: The executive and legislative and judicial branches of the federal government of the United States

## Should is mandatory

### Should means must

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/should)

must; ought (used to indicate duty, propriety, or expediency

### Should expresses duty – most predictable def.

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/should)

Rules similar to those for choosing between shall and will have long been advanced for should and would, but again the rules have had little effect on usage. In most constructions, would is the auxiliary chosen regardless of the person of the subject: If our allies would support the move, we would abandon any claim to sovereignty. You would be surprised at the complexity of the directions. Because the main function of should in modern American English is to express duty, necessity, etc. (You should get your flu shot before winter comes), its use for other purposes, as to form a subjunctive, can produce ambiguity, at least initially: I should get my flu shot if I were you. Furthermore, should seems an affectation to many Americans when used in certain constructions quite common in British English: Had I been informed, I should (American would) have called immediately. I should (American would) really prefer a different arrangement. As with shall and will, most educated native speakers of American English do not follow the textbook rule in making a choice between should and would. See also shall.

## Should is not mandatory

### Should is not mandatory – DOD definition

DOD, 2003 (“Department of Defense Standard Practice: Defense Standards Format and Content” August 1, wbdg.org/ccb/FEDMIL/std962d.pdf)

h. “Shall”, the emphatic form of the verb, shall be used throughout sections 4 and 5 of the standard whenever a requirement is intended to express a provision that is binding. For example, in the requirements section, state that “The gauge shall indicate . . . ” and in the test section, “The indicator shall be turned to zero, and 220 volts of alternating current shall be applied.” For specific test procedures, the imperative form may be used, provided the entire method is preceded by “The following test shall be performed” or similar wording. Thus, “Turn the indicator to zero and apply 220 volts of alternating current.” “Shall” shall not appear in sections 1, 2, 3, or 6 of the standard. i. “Will” may be used to express a declaration of purpose on the part of the Government. It may be necessary to use “will” in cases when simple futurity is required. j. Use “should” and “may” to express nonmandatory provisions. k. “Must” shall not be used to express a mandatory provision. Use the term “shall.”

### “Should” means recommended, but not obligated

Words & Phrases, 2006 (Permanent Edition, 2006, vol 39)

C.A.10 2001. Term "should" in statute indicates recommended course of action, but does not itself imply obligation associated with "shall."—Qwest Corp. v. F.C.C., 258 F.3d 1191, on remand In re Federal-State Joint Board on Universal Service, 2003 WL 22433814, review granted in part, cause remanded Qwest Communications Inter

## Substantially

### “Substantially" means 80 to 90%—government definition.

Curtin, 2003 (John T. Curtin, Judge, United States District Court for the Western District of New York, Gateway Equipment Corp. -vs- United States of America, United States District Court for the Western District of New York, lexis)

The government cites Webster's Ninth New College Dictionary for the definitions of "limit" and "impairment" as suggesting "meanings equivalent to restriction and reduction, respectively." Item 30, p. 3, n.1. It posits that the word "substantially" suggests "an order of magnitude equivalent to 80% or 90%." Id. It concludes that "using those definitions, 'substantially limited' and 'substantially impaired' means that there must be an 80%-90% restriction and/ or reduction of use by virtue of the design of the CB-4000." Id.

### Substantially is greater than 50%.

Words and Phrases 2000 (Permanent Edition, Cumulative Annual Pamphlet, Volume 40, p. 561)

Ind.App. 1996. Within ruling that person who completes substantial portion of construction of his own home is exempt from building code requirements, "substantial" is to be understood as meaning "of ample or considerable amount, quantity, or size," and it would be inconsistent with ordinary meaning of the term to construe "substantial portion" as referring to only half of the whole. West's A.I.C. 46-7-8-3(d).-Robinson v. Monroe County, 683 N.E.2d 196.-Health & E 32.

### Substantial is at least 20%.

Words and Phrases, 2002 (Volume 40a, p. 559)

SUBSTANTIAL DECREASE Pa.Cmwith. 1996. Approximately 20% decrease in school district's enrollment during previous ten years constituted "substantial decrease" in enrollment under Public School Code, justifying demotions of certified secondary teacher to half-time status. 24 P.S. S 11-11124.—Battaglin v. Lakeland School Dist., 677 A.2d 1294.—Schools 147.10.

### Substantial is $679 million

AAAS ‘2 (Advancing Science, Serving Society,10/16/2002, “House Boosts NASA Request, Adds Earmarks and Outer Planets Missions” http://www.aaas.org/spp/rd/nasa03h.pdf)

Two-thirds of the NASA budget, which excludes the Space Shuttle program and its associated costs, is classified as R&D. NASA’s R&D would total $10.9 billion in the House plan, slightly above the Senate allocation, a substantial $697 million or 6.9 percent above FY 2002, and $258 million above the request. Because the Space Shuttle program and other non-R&D programs would decline, the total NASA budget of $15.3 billion would show a smaller increase (up 2.7 percent). (For details of the Senate appropriation for NASA R&D, see the August 6 AAAS R&D Funding Update. For details of the request for NASA, see Chapter 10 of AAAS Report XXVII: R&D FY 2003).

### A substantial increase is in billions

AAAS ‘2 (Advancing Science, Serving Society,10/16/2002, “House Boosts NASA Request, Adds Earmarks and Outer Planets Missions” http://www.aaas.org/spp/rd/nasa03h.pdf)

The Science, Aeronautics, and Technology (SAT) account, which funds nearly all of NASA’s R&D not related to the Space Station, would receive $9.1 billion, 13.6 percent or $1.1 billion above the FY 2002 funding level. This substantial increase would go primarily to the Space Science and the Aero-Space Technology Programs, as in the Senate proposal.

## Increase generic

### Increase is to make greater

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/increase)

to make greater, as in number, size, strength, or quality; augment; add to: to increase taxes.

### To become greater.

Collins, 2009 (Collins English Dictionary - Complete & Unabridged 10th Edition)

World English Dictionary increase — vb 1. to make or become greater in size, degree, frequency, etc; grow or expand

## Increase is pre-existing

### Increase requires making something previously existing greater.

Buckley et al., 2006 (Jeremiah, attorney, Amicus Curiae Brief, Safeco Ins. Co. of America et al v. Charles Burr et al., google)

First, the court said that the ordinary meaning of the word “increase” is “to make something greater,” which it believed should not “be limited to cases in which a company raises the rate that an individual has previously been charged.” 435 F.3d at 1091. Yet the definition offered by the Ninth Circuit compels the opposite conclusion. Because “increase” means “to make something greater,” there must necessarily have been an existing premium, to which Edo’s actual premium may be compared, to determine whether an “increase” occurred. Congress could have provided that “ad-verse action” in the insurance context means charging an amount greater than the optimal premium, but instead chose to define adverse action in terms of an “increase.” That def-initional choice must be respected, not ignored. See Colautti v. Franklin, 439 U.S. 379, 392-93 n.10 (1979) (“[a] defin-ition which declares what a term ‘means’ . . . excludes any meaning that is not stated”). Next, the Ninth Circuit reasoned that because the Insurance Prong includes the words “existing or applied for,” Congress intended that an “increase in any charge” for insurance must “apply to all insurance transactions – from an initial policy of insurance to a renewal of a long-held policy.” 435 F.3d at 1091. This interpretation reads the words “exist-ing or applied for” in isolation. Other types of adverse action described in the Insurance Prong apply only to situations where a consumer had an existing policy of insurance, such as a “cancellation,” “reduction,” or “change” in insurance. Each of these forms of adverse action presupposes an already-existing policy, and under usual canons of statutory construction the term “increase” also should be construed to apply to increases of an already-existing policy. See Hibbs v. Winn, 542 U.S. 88, 101 (2004) (“a phrase gathers meaning from the words around it”) (citation omitted).

### Increase requires pre-existence.

Brown, 2003 (US Federal Judge for the United States District Court for the District of Oregon, Elena mark and paul Gustafson v. Valley Insurance Company and Valley Property and Casualty, July 17, lexis)

FCRA does not define the term "increase." The plain and ordinary meaning of the verb "to increase" is to make something greater or larger. 4 Merriam-Webster's [\*\*22] Collegiate Dictionary 589 (10th ed. 1998). The "something" that is increased in the statute is the "charge for any insurance." The plain and common meaning of the noun "charge" is "the price demanded for something." Id. at 192. Thus, the statute plainly means an insurer takes adverse action if the insurer makes greater (i.e., larger) the price demanded for insurance. An insurer cannot "make greater" something that did not exist previously. The statutory definition of adverse action, therefore, clearly anticipates an insurer must have made an initial charge or demand for payment before the insurer can increase that charge. In other words, an insurer cannot increase the charge for insurance unless the insurer previously set and demanded payment of the premium for that insured's insurance [\*\*23] coverage at a lower price.

## Increase is not pre-existing

### Increase doesn’t require pre-existence

Reinhardt, 2005 (U.S. Judge for the United States Court of Appeals for the ninth circuit, Reynolds and Rausch v. Hartford Financial Services Group, inc, lexis)

Specifically, we must decide whether charging a higher price for initial insurance than the insured would otherwise have been charged because of information in a consumer credit report constitutes an "increase in any charge" within the meaning of FCRA. First, we examine the definitions of "increase" and "charge." Hartford Fire contends that, limited to their ordinary definitions, these words apply only when a consumer has previously been charged for insurance and that charge has thereafter been increased by the insurer. The phrase, "has previously been charged," as used by Hartford, refers not only to a rate that the consumer has previously paid for insurance but also to a rate that the consumer has previously been quoted, even if that rate was increased [\*\*23] before the consumer made any payment. Reynolds disagrees, asserting that, under [\*1091] the ordinary definition of the term, an increase in a charge also occurs whenever an insurer charges a higher rate than it would otherwise have charged because of any factor--such as adverse credit information, age, or driving record 8 --regardless of whether the customer was previously charged some other rate. According to Reynolds, he was charged an increased rate because of his credit rating when he was compelled to pay a rate higher than the premium rate because he failed to obtain a high insurance score. Thus, he argues, the definitions of "increase" and "charge" encompass the insurance companies' practice. Reynolds is correct. “Increase" means to make something greater. See, e.g., OXFORD ENGLISH DICTIONARY (2d ed. 1989) ("The action, process, or fact of becoming or making greater; augmentation, growth, enlargement, extension."); WEBSTER'S NEW WORLD DICTIONARY OF AMERICAN ENGLISH (3d college ed. 1988) (defining "increase" as "growth, enlargement, etc[.]"). "Charge" means the price demanded for goods or services. See, e.g., OXFORD ENGLISH DICTIONARY (2d ed. 1989) ("The price required or demanded for service rendered, or (less usually) for goods supplied."); WEBSTER'S NEW WORLD DICTIONARY OF AMERICAN ENGLISH (3d college ed. 1988) ("The cost or price of an article, service, etc."). Nothing in the definition of these words implies that the term "increase in any charge for" should be limited to cases in which a company raises the rate that an individual has previously been charged.

## Its

### Its means associated in some way with

The Free Dictionary’11 (2011, http://www.thefreedictionary.com/its)

a. of, belonging to, or associated in some way with it its left rear wheel

### Its is possessive

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/its)

the possessive form of it (used as an attributive adjective): The book has lost its jacket. I'm sorry about its being so late.

### Its refers to the agent of action

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/its)

: of or relating to it or itself especially as possessor, agent, or object of an action <going to its kennel> <a child proud of its first drawings> <its final enactment into law>

## Space Exploration 1/3

### Space exploration is artificial satellites, space probes, and human spacecrafts with human crews

The Free Dictionary ‘11 (http://encyclopedia2.thefreedictionary.com/Space+Exploration)

space exploration, the investigation of physical conditions in space and on stars, planets, and other celestial bodies through the use of artificial satellites (spacecraft that orbit the earth), space probes (spacecraft that pass through the solar system and that may or may not orbit another celestial body), and spacecraft with human crews.

### Space exploration is the physical exploration of space by human or robotic spacecrafts.

E-TEI TECHNOLOGY ’11 (4/28/11, “Space Technology in Modern World”, http://www.e-tei.org/space-technology-in-modern-world.html)

Space exploration is the use of astronomy and space technology to explore outer space. Physical exploration of space is conducted both by human spaceflights and by robotic spacecraft. Space exploration has often been used as a proxy competition for geopolitical rivalries such as the Cold War.

### Space exploration incorporates new technologies that enable future capabilities for deep space exploration

NASA ’11 (National Aeronautics and Space Administration, 5/25/11, “Exploration Technology Development Program”, http://www.nasa.gov/exploration/acd/technology\_dev.html)

Advanced exploration systems incorporate new technologies to enable future capabilities for deep space exploration. Prototype systems are demonstrated in ground tests and flight experiments.

Space Exploration 2/3

### Space exploration includes colonization?

The European Space Agency ‘5 (“The Future of European Space Exploration”, December 2005, <http://esamultimedia.esa.int/docs/exploration/StakeholderConsultations/LongTerm_Strategy_Executive_Summary.pdf>)

Following the January 2004 Presidential Vision, NASA has been asked to focus mainly on space exploration. The agency is to define and implement a programme to return Americans to the Moon by 2020 "as a first step to Mars and beyond".

### Space exploration encompasses colonization, resource ultilisation, human and cargo transport, and advanced propulsion systems.

The European Space Agency ‘5 (“The Future of European Space Exploration”, December 2005, <http://esamultimedia.esa.int/docs/exploration/StakeholderConsultations/LongTerm_Strategy_Executive_Summary.pdf>)

In the near-term, other strategic space exploration capabilities encompass capabilities for entry / descent and landing on planetary surfaces. In the longer term they include in situ resource utilisation, human and cargo transportation, and advanced propulsion and power systems, such as those based on nuclear technology.

### Space exploration encompasses accessible regions using currently feasible technology

Curtis ‘9 (Jeremy, Head of Education at the UK Space Agency, et al., December 2009, “Space Exploration Review”, British National Space Centre, <http://www.lpi.usra.edu/lunar/strategies/UKSpaceExporationReview2009.pdf>)

In the context of this report space exploration encompasses the region of the solar system that is accessible to human beings using currently feasible technology (or to reiterate the Global Exploration Strategy, 'Solar System destinations where humans may one day live and work'). This includes the Moon, Mars, certain Near Earth Objects (asteroids) and particular regions of space from Low Earth Orbit (LEO) through to the various libration points in the Earth-Moon and Earth-Sun systems. These latter locations have special properties and uses (see box on p22).

### Space exploration excludes currently inaccessible regions and satellites

Curtis ‘9 (Jeremy, Head of Education at the UK Space Agency, et al., December 2009, “Space Exploration Review”, British National Space Centre, <http://www.lpi.usra.edu/lunar/strategies/UKSpaceExporationReview2009.pdf>)

Excluded from this definition of space exploration is the purely scientific exploration of the outer Solar System (since we cannot yet build space vehicles able to carry and protect astronauts on such voyages), as well as space-based observatories used to study the stars and universe beyond. Likewise unmanned satellites in Earth orbit are excluded – for example those providing Earth observation, communications and navigation services). Both robotic and human activities are included – exploration per se does not favour one over the other, though in many cases a combination of both is the best approach.

Space Exploration 3/3

### Space exploration encompasses goals – studies, technology demonstrations, testing new techniques, and the search for mineral resources.

Curtis ‘9 (Jeremy, Head of Education at the UK Space Agency, et al., December 2009, “Space Exploration Review”, British National Space Centre, <http://www.lpi.usra.edu/lunar/strategies/UKSpaceExporationReview2009.pdf>)

Space exploration within this definition encompasses projects which may combine in varying degrees scientific, technological, cultural and economic goals. Example goals include science objectives such as the study of lunar geology to understand the history of the Earth; technology demonstrations, such as testing new communication techniques; and commercial projects such as the search for usable mineral resources on the Moon or Near Earth Object

### Space exploration includes human space flights

Logsdon 9 (<http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20100025875_2010028362.pdf>

Dr. Logsdon is Professor Emeritus of Political Science and International Affairs at George Washington University’s Elliott School of International Affairs. Prior to his leaving active faculty status in June 2008, he was on the faculty of the George Washington University for 38 years; before that he taught at the Catholic University of America for four years. He was the founder in 1987 and long-time Director of GW’s Space Policy Institute. From 1983-2001, he was also Director of the School’s Center for International Science and Technology Policy. He is also a faculty member of the International Space University. During the 2007-2008 academic year, he was a Distinguished Visiting Professor at MIT’s Science, Technology and Society Program on a part-time basis. He holds a B.S. in Physics from Xavier University (1960) and a Ph.D. in Political Science from New York University (1970). )

 Many believe that the only sustainable rationale for a government-funded program of human spaceflight is to take the lead in exploring the solar system beyond low-Earth orbit.20 The MIT white paper provides an insightful definition of exploration: Exploration is a human activity, undertaken by certain cultures at certain times for particular reasons. It has components of national interest, scientific research, and technical innovation, but is defined by none of them. We define exploration as an expansion of the realm of human experience, bringing people into new places, situations, and environments, expanding and redefining what it means to be human. What is the role of Earth in human life? Is human life fundamentally tied to the earth, or could it survive without the planet? Human presence, and its attendant risk, turns a spaceflight into a story that is compelling to large numbers of people. Exploration also has a moral dimension because it is in effect a cultural conversation on the nature and meaning of human life. Exploration by this definition can only be accomplished by direct human presence and may be deemed worthy of the risk of human life.21 In the wake of the 2003 Columbia accident that took the lives of seven astronauts and the report of the Columbia Accident Investigation Board that criticized the absence of a compelling mission for human spaceflight as “a failure of national leadership,”22 the United States, in January 2004, adopted a new policy to guide its human spaceflight activities. The policy directed NASA to “implement a sustained and affordable human and robotic program to explore the solar system and beyond” and to “extend human presence across the solar system, starting with a human return to the Moon by the year 2020, in preparation for human exploration of Mars and other destinations.”23 This policy seems totally consistent with the definition of exploration provided in the MIT white paper.

## Exploration

### Exploration is the act of exploring

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/exploration)

: the act or an instance of exploring

### Exploration means to investigate, study, or analyze

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/exploring)

a : to investigate, study, or analyze : look into <explore the relationship between social class and learning ability> —sometimes used with indirect questions <to explore where ethical issues arise — R. T. Blackburn> b : to become familiar with by testing or experimenting <explore new cuisines>

### Exploration requires travelling over new territory

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/exploring)

: to travel over (new territory) for adventure or discovery

### Exploration is a trip into unfamiliar regions

Collins English Dictionary ‘9 (2009, http://dictionary.reference.com/browse/exploration)

3. an organized trip into unfamiliar regions, esp for scientific purposes; expedition

### Exploration is the investigation of unknown regions

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/exploration)

–noun 1. an act or instance of exploring or investigating; examination. 2. the investigation of unknown regions.

### Exploration includes probes

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/explore)

3. Surgery . to investigate into, especially mechanically, as with a probe.

## And/Or

###  “And/or” means one, the other, or both

Words & Phrases ‘7 (Permanent Edition, 2007, vol 3A, p.220)

C.A.1 (Mass.) 1981. Words "and/or," for contract purposes, commonly mean the one or the other or both.—Local Division 589, Amalgamated Transit Union, AFL-CIO, CLC v. Com. of Mass., 666 F.2d 618, certiorari denied Local Div. 589, Amalgamated Transit Union AFL-CIO v. Massachusetts, 102 S.Ct. 2928, 457 U.S. 1117, 73 L.Ed.2d 1329.— Contracts 159.

## Space Development 1/2

### “Development” includes SPS, launch vehicles.

Hsu Cox, 2009 (Feng Hsu, Ph.D. and Senior Fellow – Aerospace Technology Working Group, and Ken Cox, Ph.D. and Founder & Director – Aerospace Technology Working Group, “Sustainable Space Exploration and Space Development - A Unified Strategic Vision”, 2-20, http://www.spacerenaissance.org/papers/A-UnifiedSpaceVision-Hsu-Cox.pdf)

In our view, even with adequate reform in its governance model, NASA is not a rightful institution to lead or manage the nation's business in Space Development projects. This is because human space development activities, such as development of affordable launch vehicles, RLVs, space-based solar power, space touring capabilities, communication satellites, and trans-earth or trans-lunar space transportation infrastructure systems, are primarily human economic and commercial development endeavors that are not only cost-benefit-sensitive in project management, but are in the nature of business activities and are thus subject to fundamental business principles related to profitability, sustainability, and market development, etc. Whereas, in space exploration, by its nature and definition, there are basic human scientific research and development (R&D) activities that require exploring the unknowns, pushing the envelope of new frontiers or taking higher risks with full government and public support, and these need to be invested in solely by taxpayer contributions.

### Space development includes weaponization.

Crawford, 1995 (I. A. Crawford The Department of Physics and Astronomy, University College London. 1995. "Space development: social and political implications". Space policy (0265-9646), 11 (4), p. 219.)

Disarmament Even allowing for international cooperation, there are few sectors of the world economy from which it would be politically realistic to divert the resources envisaged here for space investment. One of the few is military spending, which worldwide is currently about US$900 billion annually. Resources of the required order of magnitude could be taken from this source without adversely affecting the rest of the world economy. Moreover, as we noted above, space development is especially suitable as an alternative outlet for the energies of the military-industrial complex.

Space Development 2/2

### Space development must be peaceful.

Spacelaw, 1969 (Law Concerning The National Space Development Agency Of Japan (Law No. 50 of June 23, 1969. http://www.spacelaw.olemiss.edu/library/space/Japan/1969-50%20-%20NASDA.pdf)

The National Space Development Agency shall be established with a view to conducting in an integrated, systematic and effective manner the development, launching and tracking of artificial satellites and rockets for the launching of artificial satellites, exclusively for peaceful purposes, thereby contributing to the promotion of space development and utilization.

### “Space development” is creating hardware for peaceful purposes --- includes satellites and launch vehicles

Hwang 6 (Chin Young, Policy and International Relations Division – Korea Aerospace Research Institute, “Space Activities in Korea—History, Current Programs and Future Plans”, Space Policy, 22(3), August, p. 199)

Space development in Korea has several characteristics. First, space development activities are initiated by a scientific research institute, KARI, and a university, KAIST SaTRec, for peaceful purposes. Most development projects have been proposed by research institutes, not government decision makers. Second, most satellite missions are multipurpose. Since space development has not been initiated by the top levels of government, funding has to be sought by research institutes and MOST. In order to get enough funds, missions must be able to meet various requirements of related ministries. At the same time, each space development project has to justify its feasibility in terms of an economic cost–benefit analysis. Third, Korean space activities have been focused on hardware—development of satellites and launch vehicles—rather than on the development of a full vision and the missions that would accompany this. The national space development plan reflects these characteristics, even though it contains some mention of space science and manned missions to the ISS through the international cooperation program.

### Space development includes weaponization.

Crawford, 1995 (I. A. Crawford The Department of Physics and Astronomy, University College London. 1995. "Space development: social and political implications". Space policy (0265-9646), 11 (4), p. 219.)

Disarmament Even allowing for international cooperation, there are few sectors of the world economy from which it would be politically realistic to divert the resources envisaged here for space investment. One of the few is military spending, which worldwide is currently about US$900 billion annually. Resources of the required order of magnitude could be taken from this source without adversely affecting the rest of the world economy. Moreover, as we noted above, space development is especially suitable as an alternative outlet for the energies of the military-industrial complex.

## Development

### Even if replacement leads to development, development doesn’t include replacement

Berend and Hajdu ’75 (Iván and George, Authors for M.E. Sharpe Inc., Winter 1975, “Eastern European Economics”, http://www.jstor.org/stable/i404669)

The problems of the investment system cannot easily be separated into "true" development and "simple" replacement. The notion of development does not include replacement, but almost every replacement potentially entails (and of necessity must entail) the possibility of development. Replacements usually mean the putting into operation of machinery and equipment having different technical-economic parameters than those re-placed, and thus the new machine will produce more or cheaper or faster or will be capable of turning out better quality products.

### Development does not include replacement**, demolition, improvement, or repair.**

California Coastal Act 1990 (October 10, 1990, http://www.coastal.ca.gov/recap/sandcity-1990.pdf)

Section 30212 also specifically indicates what the term "new development" does not include (i.e., certain replacement, demolition, improvement, and repair activities to structures).

### Develop means to set forth or make clear

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/developing)

a : to set forth or make clear by degrees or in detail : expound <develop a thesis>

### Develop means to work out the possibilities of

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/developing)

a : to work out the possibilities of <develop an idea>

### Develop means to create

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/developing)

b : to create or produce especially by deliberate effort over time <develop new ways of doing business> <develop software>

## Beyond

### Beyond means on, at, or farther than

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/beyond)

–preposition 1. on, at, or to the farther side of: Beyond those trees you'll find his house. 2. farther on than; more distant than: beyond the horizon; beyond the sea. 3. outside the understanding, limits, or reach of; past: beyond comprehension; beyond endurance; beyond help.

### Beyond means at or to the further side of

Collins English Dictionary ‘9 (2009, http://dictionary.reference.com/browse/beyond)

1. at or to a point on the other side of; at or to the further side of: beyond those hills there is a river.

#### Beyond means outside the limits of

Collins English Dictionary ‘9 (2009, http://dictionary.reference.com/browse/beyond)

2. outside the limits or scope of: beyond this country's jurisdiction

## Mesosphere

### The mesosphere is 250-650 miles above the surface of the Earth

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/mesosphere)

–noun 1. (in the classification of the earth's atmosphere by chemical properties) the region between the ionosphere and the exosphere, extending from about 250–650 miles (400–1050 km) above the surface of the earth.

### The mesosphere is 20-50 miles above the surface of the Earth

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/mesosphere)

2. (in the classification of the earth's atmosphere by thermal properties) the region between the stratosphere and the thermosphere, extending from about 20–50 miles (32–80 km) above the surface of the earth.

## ISS

I thought it’d be funny to read this with the first “mesosphere” card. :P

### The ISS is about 240 miles above the surface of the Earth

NASA ‘3 (National Aeronautics and Space Administration, 10/30/2003, “Earth Observatory: Watching the World Go By”, http://www.nasa.gov/audience/foreducators/postsecondary/features/F\_EO\_Watching\_the\_World\_Go\_By.html)

One of my favorite things to do when I have time off is to just watch the world go by. Whenever I get a chance, I spend time just observing the planet below. It turns out you can see a lot more from up here than you might expect. First off, we aren't as far away as some people think - our orbit is only about 240 miles above the surface of the Earth. While this is high enough to see that the Earth is round (believe me, it is), we are still just barely skimming the surface when you consider that the diameter of the Earth is over 8000 miles.

### The ISS orbits above the Earth between 218 and 221 miles.

Holladay ‘5 (April, Science Journalist for USA Today, 7/29/2005, “Spotting the space station, and why its clock ticks slower”, http://www.usatoday.com/tech/columnist/aprilholladay/2005-07-29-space-station\_x.htm)

The Station's celestial path is an oval-shaped path—an elliptical orbit, which varies from 218 miles (351 km) to 221 miles (356 km) from Earth. Going about 17,200 miles per hour, the Station circles Earth 16 times a day at an inclination (a measure of the tilt of the ISS' orbital plane) of 51.6 degrees to the equator. The Station eventually crosses almost every point on Earth: flying over 85% of the globe and 95% of its population.

# Violations

## Continuation/Replacement is not topical

### A. Interpretation: Topical affs must develop new capabilities, not add to or replace existing capabilies.

### Increase is to make greater

Dictionary.com ’11 (Random House, Inc., 2011, http://dictionary.reference.com/browse/increase)

to make greater, as in number, size, strength, or quality; augment; add to: to increase taxes.

### Even if replacement leads to development, development doesn’t include replacement

Berend and Hajdu ’75 (Iván and George, Authors for M.E. Sharpe Inc., Winter 1975, “Eastern European Economics”, http://www.jstor.org/stable/i404669)

The problems of the investment system cannot easily be separated into "true" development and "simple" replacement. The notion of development does not include replacement, but almost every replacement potentially entails (and of necessity must entail) the possibility of development. Replacements usually mean the putting into operation of machinery and equipment having different technical-economic parameters than those re-placed, and thus the new machine will produce more or cheaper or faster or will be capable of turning out better quality products.

### B. Violation.

1. The aff prevents a decrease; it doesn’t actually increase.

2. The aff replaces existing capabilities; it doesn’t develop further.

### C. Standards

1. Predictable limits – continuing/replacing an existing capability unlimits the aff. They can claim advantages from both the decrease and the increase. They can replace the orion rocket with the US space program and get an orion bad advantage. There’s no way for the aff to predict the hundreds of different capabilities.

2. Core Ground - They can no link all of our DA’s. Our links are all based on having more space exploration and development. We can’t run even generic spending DA’s because there’s no increase.

3. Effects Topicality - At best, the aff may further development on the ISS by keeping the shuttle program. This is an effect of the plan, not a mandate of the plan itself. Effects unlimits the resolution because many things (list them) can affect space development and exploration.

### D. Topicality is a voting issue

The aff undermines good decision making - as policy makers we will never be able to be educated when the debate is one sided and we have no way to argue against the aff.

## Development = Peaceful

###  A. Interpretation – Topical affs must increase exploration and/or development for peaceful purposes.

### Space development must be peaceful.

Spacelaw, 1969 (Law Concerning The National Space Development Agency Of Japan (Law No. 50 of June 23, 1969. http://www.spacelaw.olemiss.edu/library/space/Japan/1969-50%20-%20NASDA.pdf)

The National Space Development Agency shall be established with a view to conducting in an integrated, systematic and effective manner the development, launching and tracking of artificial satellites and rockets for the launching of artificial satellites, exclusively for peaceful purposes, thereby contributing to the promotion of space development and utilization.

### B. Violation – The aff militarizes space.

### C. Standards

### Predictable limits – the aff unlimits the resolution. The aff justifies a myriad of things like using satellites for military purposes, missiles, shuttles, rockets making it impossible to research and predict all of the different military capabilities. This makes debate unfair because we won’t have any way to test the opportunity costs of the aff.

### D. Topicality is a voter

### The aff undermines the decision making process - as policy makers we will never be able to be educated when the debate is one sided and we have no way to argue against the aff.

## Increase = Pre-existing

### A. Interpretation: Topical affs must add to existing capabilities, not develop new ones.

### Increase is an addition to an existing capability

Wordnet 3.0 Princeton University 2006 (http://wordnet.princeton.edu/perl/webwn)

Definition - Increase - addition: a quantity that is added; "there was an addition to property taxes this year"; "they recorded the cattle's gain in weight over a period”

### Increase implies pre-existence

Webster’s 1998

Increase: to make greater, argument, implies to what is already well grown, or well developed

### B. Violation - The aff creates a capability that’s never been implemented before.

### C. Standards

### 1. Predictable limits – There are an infinite number of affs that could be created which unlimits the resolution and explodes the neg research burden. Pre-existing is crucial because it narrows the number of cases to a set number of policies.

### 2. Core Ground – Implementing something that’s not pre-existing hurts neg ground because there’s no literature if it doesn’t exist.

### D. Topicality is a voter

### The aff undermines the decision making process - as policy makers we will never be able to be educated when the debate is one sided and we have no way to argue against the aff.

## Exploration = physical, not research

### A. Interpretation: Topical affs must physically explore space beyond the earth’s mesosphere, not research from the earth.

### Exploration requires travelling over new territory

Merriam-Webster ’11 (2011, http://www.merriam-webster.com/dictionary/exploring)

: to travel over (new territory) for adventure or discovery

### Space exploration is artificial satellites, space probes, and human spacecrafts with human crews

The Free Dictionary ‘11 (http://encyclopedia2.thefreedictionary.com/Space+Exploration)

space exploration, the investigation of physical conditions in space and on stars, planets, and other celestial bodies through the use of artificial satellites (spacecraft that orbit the earth), space probes (spacecraft that pass through the solar system and that may or may not orbit another celestial body), and spacecraft with human crews.

### B. Violation – The aff doesn’t physically explore space beyond the earth’s mesosphere.

### C. Standards

### Predictable limits – allowing the aff to research from earth unlimits the resolution and justifies things like studying from a book about space which is impossible for the neg to prepare for the unlimited amount of unpredictable affs.

### Core ground – the neg can get no links from the actual mandate of the plan, which is to research. This means the aff can sever out of any of their advantages because aren’t a direct consequence of the plan.

### D. Topicality is a voter

### The aff undermines the decision making process - as policy makers we will never be able to be educated when the debate is one sided and we have no way to argue against the aff.

## T- Substantial (SBSP Aff)

### A. Interpretation - A substantial increase in exploration and/or development is in billions

AAAS ‘2 (Advancing Science, Serving Society,10/16/2002, “House Boosts NASA Request, Adds Earmarks and Outer Planets Missions” http://www.aaas.org/spp/rd/nasa03h.pdf)

The Science, Aeronautics, and Technology (SAT) account, which funds nearly all of NASA’s R&D not related to the Space Station, would receive $9.1 billion, 13.6 percent or $1.1 billion above the FY 2002 funding level. This substantial increase would go primarily to the Space Science and the Aero-Space Technology Programs, as in the Senate proposal.

### The plan costs only 10-30 million dollars

Garretson ‘9, (Peter A. Garretson was a Council on Foreign Relations (CFR) International Fellow in India, and a Visiting Fellow at the Institute for Defence Studies and Analyses (IDSA) New Delhi. He is an active duty Air Force officer on sabbatical as an Air Force Fellow. He was previously the Chief of Future Science and Technology Exploration for Headquarters Air Force, Directorate of Strategic Plans and Programs, and is a former DARPA Service Chiefs’ Intern, and former Los Alamos National Laboratory (LANL) Service Academy Research Associate. He is a published author on Space Grand Strategy, and is a recipient of the National Space Society’s (NSS) Space Pioneer Award, Sky’s No Limit: Space Based Solar Power the Next Major Step in the U.S.-Indo Strategic Partnership, http://www.idsa.in/sites/default/files/OP\_SkysNoLimit.pdf)

In summary, an actionable bilateral policy framework will originate with a joint statement by the respective heads of state announcing and sanctioning the activity and signing the requisite information exchange and project agreement paperwork. An initial five-year, $10-30 million programme, managed in the respective executive, will develop contributing technologies and build a competent work force via the project/initiative and technology mission model, culminating in a roadmap and plan for an international mega-science project for a demonstration prototype. A second, $10 billion, 10-year phase will see the formation of an international consortium to construct a sub-scale space solar power system retiring all significant technical risk. The final stage will entail the bilateral leadership to set up an international for-profit consortium along the lines of COMSAT/INTELSAT model to provide a scalable green energy system to allow development and address energy security and carbon mitigation concerns.

### B. Violation – the aff is a miniscule plan that only costs at most 30 million dollars.

### C. Standards

1. Predictable limits – the aff unlimits the resolution. They justify minor plans and changes that would barely cost any money. It’s impossible for the neg to research and get literature on tiny affs. This makes the debate bad for education because we can’t rigorously test the aff.

2. Core ground – We lose all of our DA links. Their plan is so small that we won’t be able to get even generic DA’s like spending or politics.

### D. Topicality is a voter

The aff undermines good decision making - as policy makers we will never be able to be educated when the debate is one sided and we have no way to argue against the aff.