

## Chapter 1 : Growing Toward Balance and Happiness Within

*Growing Toward Balance promotes a holistic method of self-improvement, adopting the notion that who we are, how we feel, and what we accomplish are all intricately entwined. Combining coaching-style self-questioning, teachings from classic spiritual texts, and research-based suggestions for practical ways to implement positive change, this.*

Disclaimer Information on this website is not intended to be used for medical diagnosis or treatment. VeDA does not specifically endorse any product or service advertised on this site. The Human Balance System Good balance is often taken for granted. Good balance is often taken for granted. However, with impaired balance such activities can be extremely fatiguing and sometimes dangerous. Symptoms that accompany the unsteadiness can include dizziness, vertigo, hearing and vision problems, and difficulty with concentration and memory. Balance is achieved and maintained by a complex set of sensorimotor control systems that include sensory input from vision sight , proprioception touch , and the vestibular system motion, equilibrium, spatial orientation ; integration of that sensory input; and motor output to the eye and body muscles. Injury, disease, certain drugs, or the aging process can affect one or more of these components. In addition to the contribution of sensory information, there may also be psychological factors that impair our sense of balance. Sensory input Maintaining balance depends on information received by the brain from three peripheral sources: All three of these information sources send signals to the brain in the form of nerve impulses from special nerve endings called sensory receptors. Balance is achieved and maintained by a complex set of sensorimotor control systems. Input from the eyes Sensory receptors in the retina are called rods and cones. Rods are believed to be tuned better for vision in low light situations e. Cones help with color vision, and the finer details of our world. When light strikes the rods and cones, they send impulses to the brain that provide visual cues identifying how a person is oriented relative to other objects. For example, as a pedestrian takes a walk along a city street, the surrounding buildings appear vertically aligned, and each storefront passed first moves into and then beyond the range of peripheral vision. Input from the muscles and joints Proprioceptive information from the skin, muscles, and joints involves sensory receptors that are sensitive to stretch or pressure in the surrounding tissues. For example, increased pressure is felt in the front part of the soles of the feet when a standing person leans forward. With any movement of the legs, arms, and other body parts, sensory receptors respond by sending impulses to the brain. Along with other information, these stretch and pressure cues help our brain determine where our body is in space. The sensory impulses originating in the neck and ankles are especially important. Proprioceptive cues from the neck indicate the direction in which the head is turned. Input from the vestibular system Sensory information about motion, equilibrium, and spatial orientation is provided by the vestibular apparatus, which in each ear includes the utricle, saccule, and three semicircular canals. The utricle and saccule detect gravity information in a vertical orientation and linear movement. The semicircular canals, which detect rotational movement, are located at right angles to each other and are filled with a fluid called endolymph. The receptor then sends impulses to the brain about movement from the specific canal that is stimulated. When the vestibular organs on both sides of the head are functioning properly, they send symmetrical impulses to the brain. Impulses originating from the right side are consistent with impulses originating from the left side. Integration of sensory input Balance information provided by the peripheral sensory organsâ€”eyes, muscles and joints, and the two sides of the vestibular systemâ€”is sent to the brain stem. There, it is sorted out and integrated with learned information contributed by the cerebellum the coordination center of the brain and the cerebral cortex the thinking and memory center. The cerebellum provides information about automatic movements that have been learned through repeated exposure to certain motions. For example, by repeatedly practicing serving a ball, a tennis player learns to optimize balance control during that movement. Contributions from the cerebral cortex include previously learned information; for example, because icy sidewalks are slippery, one is required to use a different pattern of movement in order to safely navigate them. Processing of conflicting sensory input A person can become disoriented if the sensory input received from his or her eyes, muscles and joints, or vestibular organs sources conflicts with one another. For example, this may occur when a person is standing next to a bus that is pulling

away from the curb. The visual image of the large rolling bus may create an illusion for the pedestrian that he or she is rather than the bus is moving. However, at the same time the proprioceptive information from his muscles and joints indicates that he is not actually moving. Sensory information provided by the vestibular organs may help override this sensory conflict. In addition, higher level thinking and memory might compel the person to glance away from the moving bus to look down in order to seek visual confirmation that his body is not moving relative to the pavement. Motor output As sensory integration takes place, the brain stem transmits impulses to the muscles that control movements of the eyes, head and neck, trunk, and legs, thus allowing a person to both maintain balance and have clear vision while moving. Motor output to the muscles and joints A baby learns to balance through practice and repetition as impulses sent from the sensory receptors to the brain stem and then out to the muscles form a new pathway. With repetition, it becomes easier for these impulses to travel along that nerve pathway a process called facilitation and the baby is able to maintain balance during any activity. This pathway facilitation is the reason dancers and athletes practice so arduously. Even very complex movements become nearly automatic over a period of time. This also means that if a problem with one sensory information input were to develop, the process of facilitation can help the balance system reset and adapt to achieve a sense of balance again. For example, when a person is turning cartwheels in a park, impulses transmitted from the brain stem inform the cerebral cortex that this particular activity is appropriately accompanied by the sight of the park whirling in circles. With more practice, the brain learns to interpret a whirling visual field as normal during this type of body rotation. Alternatively, dancers learn that in order to maintain balance while performing a series of pirouettes, they must keep their eyes fixed on one spot in the distance as long as possible while rotating their body. Motor output to the eyes The vestibular system sends motor control signals via the nervous system to the muscles of the eyes with an automatic function called the vestibulo-ocular reflex VOR. When the head is not moving, the number of impulses from the vestibular organs on the right side is equal to the number of impulses coming from the left side. When the head turns toward the right, the number of impulses from the right ear increases and the number from the left ear decreases. The difference in impulses sent from each side controls eye movements and stabilizes the gaze during active head movements e. The coordinated balance system The human balance system involves a complex set of sensorimotor-control systems. Its interlacing feedback mechanisms can be disrupted by damage to one or more components through injury, disease, or the aging process. Impaired balance can be accompanied by other symptoms such as dizziness, vertigo, vision problems, nausea, fatigue, and concentration difficulties. We see new diagnostic tools and research studies, more accessible treatments, and a growing respect for how life-changing vestibular disorders can be. Your support of VeDA matters. Theory and Practical Applications. Journal of Vestibular Research ;16 3:

*Remember, finding balance and happiness within yourself begins with a commitment to your own self care. Self care = self connection. And self care is an important part of my philosophy known as Growth in Motion!!*

While partisanship among voters usually does not change much on a yearly basis, some differences have widened over time, especially by educational attainment, gender and age. And these gaps are even larger when categories are combined, such as education, race and gender. While the overall balance of leaned party affiliation has not changed much in recent years, this is the first time since that as many as half of registered voters have affiliated with or leaned toward the Democratic Party. Since , the last midterm election year, there have been notable changes in party identification among several groups of voters. And as we noted in our report on party affiliation , the composition of the Republican and Democratic electorates are less alike than at any point in the past quarter-century. For decades, women have been more likely than men to identify as Democrats or lean Democratic. The share of women identifying as Democrats or leaning Democratic is up 4 percentage points since and is at one of its highest points since . Among men, there has been less recent change: That is comparable to the balance of leaned party identification since . Record share of college graduates align with Democrats. Voters who have completed college make up a third of all registered voters. The much larger group of voters who do not have a four-year degree is more evenly divided in partisan affiliation. And voters with no college experience have been moving toward the GOP: Continued racial divisions in partisan identification. These figures are little changed from recent years. Larger differences among whites by education. Millennials, especially Millennial women, tilt more Democratic. As noted in our recent report on generations and politics , Millennial voters are more likely than older generations to affiliate with the Democratic Party or lean Democratic. The gender gap in leaned party identification among Millennials is wider than among older generations. Across several dimensions — race and ethnicity, education and religious affiliation — the profile of Democratic and Democratic-leaning registered voters has changed a great deal over the past two decades. The composition of Republican and Republican-leaning voters has shown less change. When race and education are taken into account, white voters who do not have a college degree make up a diminished share of Democratic registered voters. Conservatives have long constituted the majority among Republican and Republican-leaning registered voters.

**Chapter 3 : European balance of power - Wikipedia**

*Mary Kearns is the author of Growing Toward Balance ( avg rating, 4 ratings, 1 review, published ), Growing Toward Balance ( avg rating, 0 rat.*

They have recently discovered that they can make money beyond coffee, though that crop remains the main source of earnings in their households. We have come to talk with a group of women who grow coffee for Konokoy, one of the 16 primary societies that belong to the Gumutindo Coffee Cooperative. In a shaded alcove near where coffee is being dried and sorted, we meet Justine Watalunga, the project coordinator for Konokoy. She has an expressive face set off by her bright yellow dress in a traditional style and print. As one group gathers, Justine tells us the women have enjoyed the project trainings, and the social aspects of coming together. Since joining the mutually-beneficial merry-go-round, she has been able to invest in this business and has seen it double from to She says her ability to earn has helped smooth a previously fractious relationship with her husband. Justine explains the revolving merry-go-round style of saving that the women established. Each group of 20 decides on what to they will save for in a particular month—it could be household goods like cups and plates, or something to improve their businesses. They all contribute 1, shillings each week. In the first week, the full sum is divided between five women; the following week, another five women receive the money. This repeats in the next two weeks, and by the end of the month every woman has received a lump sum of 4, shillings and bought the items. But their saving strategies go beyond the simple, enforced merry-go-round system. They have all been encouraged to make budgets and save on their own. One of the older women in attendance, Esther, praises the habit. The needs at home are met, and we do not depend just on the men. Justine points to Stella, a young woman sitting in the group, and tells us that Stella got the idea to sell petrol to motorcycle drivers. She began with one jerry can, saved the proceeds from sales, and now has five jerry cans—and money in her pocket that she can call her own. When women look at Stella, they see how she has grown up. With the money she earned, she was able to pay school fees for her own children. However the land, and therefore the coffee grown on it, almost always belongs to the husband. On Mount Elgon, gender inequality has very deep roots. In the past few years, she says, she knows of about 30 husbands who have given a plot of land to women in the training program—“because the men, too, have learned about the issues—and 34 who have agreed to make the land a joint holding with their wives. Bureaucratic red tape, however, makes the official transfer of title difficult. Tabitha says it can take years. While Gumutindo requests that women keep at it until they have the documents, the cooperative does recognize the transfer of land title as soon as the process is begun. Justine herself farms coffee trees. One of her six children, a son, works with her. Her husband, however, works far away and is only home occasionally and for short times. She was trained as a master trainer more than two years ago, and has since passed on her knowledge to four other leaders who now train the women in this primary society. But then I learned to help them plan and I learned even more about saving than what I used to do, and now I feel powerful. She was defeated, largely she says because so few women are members and the men opposed her. Because in , Justine plans to win. Men say this is our store, but we will change that.

**Chapter 4 : FinAid | Student Loans | Avoiding Negative Amortization**

*The reason for the plants growing toward the light is Phototropism. When light hits the plant stem, the auxins that determine the length of the stem are destroyed, decreasing the amount of growth on that side of the stem.*

Ethylene Back to Top Ethylene is a gas produced by ripe fruits. Why does one bad apple spoil the whole bunch? Ethylene is used to ripen crops at the same time. Sprayed on a field it will cause all fruits to ripen at the same time so they can be harvested. Plant Nutrition Back to Top Unlike animals which obtain their food from what they eat plants obtain their nutrition from the soil and atmosphere. Using sunlight as an energy source, plants are capable of making all the organic macromolecules they need by modifications of the sugars they form by photosynthesis. However, plants must take up various minerals through their root systems for use. A plant balanced diet Carbon, Hydrogen, and Oxygen are considered the essential elements. Nitrogen, Potassium, and Phosphorous are obtained from the soil and are the primary macronutrients. Calcium, Magnesium, and Sulfur are the secondary macronutrients needed in lesser quantity. The micronutrients, needed in very small quantities and toxic in large quantities, include Iron, Manganese, Copper, Zinc, Boron, and Chlorine. A complete fertilizer provides all three primary macronutrients and some of the secondary and micronutrients. The label of the fertilizer will list numbers, for example, which refer to the percent by weight of the primary macronutrients. Soils play a role Soil is weathered, decomposed rock and mineral geological fragments mixed with air and water. Fertile soil contains the nutrients in a readily available form that plants require for growth. The roots of the plant act as miners moving through the soil and bringing needed minerals into the plant roots. Structure of soil, indicating presence of bacteria, inorganic, and organic matter, water, and air. Image from Purves et al. Plants use these minerals in: Structural components in carbohydrates and proteins Organic molecules used in metabolism, such as the Magnesium in chlorophyll and the Phosphorous found in ATP Enzyme activators like potassium, which activates possibly fifty enzymes Maintaining osmotic balance Mycorrhizae, bacteria, and minerals Plants need nitrogen for many important biological molecules including nucleotides and proteins. However, the nitrogen in the atmosphere is not in a form that plants can utilize. Many plants have a symbiotic relationship with bacteria growing in their roots: These plants tend to have root nodules in which the nitrogen-fixing bacteria live. Development of a root nodule, a place in the roots of certain plants, most notably legumes the pea family, where bacteria live symbiotically with the plant. Images from Purves et al. All the nitrogen in living systems was at one time processed by these bacteria, who took atmospheric nitrogen  $N_2$  and modified it to a form that living things could utilize such as  $NO_3$  or  $NO_4$ ; or even as ammonia,  $NH_3$  in the example shown below. Pathway for converting fixing atmospheric nitrogen,  $N_2$ , into organic nitrogen,  $NH_3$ . Not all bacteria utilize the above route of nitrogen fixation. Many that live free in the soil, utilize other chemical pathways. Nitrogen uptake and conversion by various soil bacteria. Roots have extensions of the root epidermal cells known as root hairs. While root hairs greatly enhance the surface area hence absorption surface, the addition of symbiotic mycorrhizae fungi vastly increases the area of the root for absorbing water and minerals from the soil. Role of the root hairs in increasing the surface area of roots to promote increased uptake of water and minerals from the soil. Water and Mineral Uptake Back to Top Animals have a circulatory system that transports fluids, chemicals, and nutrients around within the animal body. Some plants have an analogous system: Root hairs are thin-walled extensions of the epidermal cells in roots. They provide increased surface area and thus more efficient absorption of water and minerals. Water and dissolved mineral nutrients enter the plant via two routes. Water and selected solutes pass through only the cell membrane of the epidermis of the root hair and then through plasmodesmata on every cell until they reach the xylem: Water and solutes enter the cell wall of the root hair and pass between the wall and plasma membrane until they encounter the endodermis, a layer of cells that they must pass through to enter the xylem: The paths of water into the xylem of a root. The endodermis has a strip of water-proof material containing suberin known as the Casparian strip that forces water through the endodermal cell and in such a way regulates the amount of water getting to the xylem. Only when water concentrations inside the endodermal cell fall below that of the cortex parenchyma cells does water flow into the endodermis and on into the xylem.

Details of the Casparian strip. Xylem and Transport Back to Top Xylem is the water transporting tissue in plants that is dead when it reaches functional maturity. Tracheids are long, tapered cells of xylem that have end plates on the cells that contain a great many crossbars. Tracheid walls are festooned with pits. Vessels, an improved form of tracheid, have no or very few obstructions crossbars on the top or bottom of the cell. The functional diameter of vessels is greater than that of tracheids. Water is pulled up the xylem by the force of transpiration, water loss from leaves. Mature corn plants can each transpire four gallons of water per week. Transpiration rates in arid-region plants can be even higher. Water molecules are hydrogen bonded to each other. Water lost from the leaves causes diffusion of additional water molecules out of the leaf vein xylem, creating a tug on water molecules along the water columns within the xylem. This "tug" causes water molecules to rise up from the roots to eventually the leaves. The loss of water from the root xylem allows additional water to pass through the endodermis into the root xylem. Cohesion is the ability of molecules of the same kind to stick together. Water molecules are polar, having slight positive and negative sides, which causes their cohesion. Inside the xylem, water molecules are in a long chain extending from the roots to the leaves. Adhesion is the tendency of molecules of different kinds to stick together. Water sticks to the cellulose molecules in the walls of the xylem, counteracting the force of gravity and aiding the rise of water within the xylem. Cohesion-Adhesion Theory Transpiration exerts a pull on the water column within the xylem. The lost water molecules are replaced by water from the xylem of the leaf veins, causing a tug on water in the xylem. Adhesion of water to the cell walls of the xylem facilitates movement of water upward within the xylem. This combination of cohesive and adhesive forces is referred to as the Cohesion-Adhesion Theory. Guard cells are crescent-shaped cells of the epidermis that flank the stoma and regulate the size of the opening. Together, the guard cells and stoma comprise the stomatal apparatus. The inner wall of the guard cell is thicker than the rest of the wall. When a guard cell takes up potassium ions, water moves into the cell, causing the cell to become turgid and swell, opening the stoma. When the potassium leaves the guard cell, the water also leaves, causing plasmolysis of the cells, and a closing of the stoma. Ions and stomatal function. Transportation and Storage of Nutrients Back to Top Plants make sugar by photosynthesis, usually in their leaves. Some of this sugar is directly used for the metabolism of the plant, some for the synthesis of proteins and lipids, some stored as starch. Other parts of the plant also need energy but are not photosynthetic, such as the roots. Food must therefore be transported in from a source, an action accomplished by the phloem tissue. Phloem, Sugar, and Translocation Phloem consists of several types of cells: Sieve cells are tubular cells with endwalls known as sieve plates. Most lose their nuclei but remain alive, leaving an empty cell with a functioning plasma membrane. Companion cells load sugar into the sieve element sieve elements are connected into sieve tubes. Fluids can move up or down within the phloem, and are translocated from one place to another. Sources are places where sugars are being produced. Sinks are places where sugar is being consumed or stored. Food moves through the phloem by a Pressure-Flow Mechanism. Sugar moves by an energy-requiring step from a source usually leaves to a sink usually roots by osmotic pressure. The pressure causes the sap to flow toward an area of lower pressure, the sink. In the sink, the sugar is removed from the phloem by another energy-requiring step and usually converted into starch or metabolized. Plants Respond to External Stimuli Back to Top One plant response to environmental stimulus involves plant parts moving toward or away from the stimulus, a movement known as a tropism. Nastic movements are plant movements independent of the direction of the stimulus. Alterations in Growth Patterns Generate Tropisms Charles Darwin and his son Francis studied the familiar reaction of plants growing toward light: The Darwins discovered that the tips of the plant curved first, and that the curve extended gradually down the stem. By covering the tips with foil, they prevented the plant from curving. They concluded that some factor was transmitted from the tip of the plant to the lower regions, causing the plant to bend. Phototropism in the coleoptile of a monocot. We now know, from the experiments of Frits Went, that auxin, a plant hormone produced in the stem tip auxins promote cell elongation, moves to the darker side of the plant, causing the cells there to grow larger than corresponding cells on the lighter side of the plant. This produces a curving of the plant stem tip toward the light, a plant movement known as phototropism. Geotropism is plant response to gravity. Roots of plants show positive geotropism, shoots show negative geotropism. Geotropism was once thought a result of gravity influencing

auxin concentration. Several new hypotheses are currently under investigation.

Chapter 5 : botany - How do trees manage to grow equally in all directions? - Biology Stack Exchange

*I can't think of anyone more committed to recovery and the journey of living a fearlessly authentic life than Jamey. He brings a truly unique combination of integrity, strength and intention to help pull those in need out of the raging waters of addiction.*

September 28, by Felicia Harlow Leave a Comment Do you feel good about yourself inside of your closest relationships? Do you feel like you are an asset in your relationships or a hindrance? As a previous guest speaker at the University of Nebraska â€”Omaha campus my topic was Healthy Relationships During my talk, I spent a lot of time speaking about the importance of self care because I know based on experience that relationships are not their healthiest unless we each take personal responsibility for ourselves first. Practicing self care helps us to establish and maintain a healthy self connection with our body, mind, and spirit. And when we better understand ourselves and know what we want, we can better understand others and bring our unique gifts to relationships. After my speech, a student approached me and asked if I could provide a little bit of guidance about what her next steps might be around self discovery and finding balance and happiness within herself. If you are seeking healthier, more fulfilling relationships like she is then start by finding balance and happiness within yourself first. Focus on the following three things: This one exercise will help you to focus on who you are which includes your strengths and your areas for improvement. This one exercise will help you focus on yourself. Pay attention to what others say about you If you get stuck in the first exercise above especially with things you like about yourself , make an effort to listen to what others are saying about you. The important thing to remember here is to listen to those you feel you can trust. As an example, when I was growing up, my friends would always say that they could talk to me about anything and not feel judged. This was a natural gift that I had and I never realized how valuable it was until later in life. I now use this gift in my career as a self directed life coach. On another note, my former co-workers would inform me that I needed to be more assertive in my work environment because it seemed like I was holding back. This feedback took me a very long time to figure out and after much introspection and reflection; I discovered that I was in the wrong environment. When I switched my career to an environment that was more appropriate for me, I became more assertive and I expressed my thoughts and feelings â€” naturally! Today, start making a list of things your closest friends, teachers, and family members have shared with you about you. Remember, finding balance and happiness within yourself begins with a commitment to your own self care. And self care is an important part of my philosophy known as Growth in Motion!! You will feel better about yourself for doing so. Take Care of Yourself,.

**Chapter 6 : Plant Hormones/Nutrition**

*It's common to get caught up in the minutia of running the day to day operations, and often your own well-being gets put on hold as you're growing a successful business. We partner with you to open up capacity to do the things that only you can do to get your business to the next level.*

**Benefits of Paying the Interest on Student Loans During the In-School and Grace Periods Advertisement**  
Many student loan programs let borrowers skip making payments while the student is in school and for six months after graduation. The lender still charges interest on the loan during the in-school deferment, but the unpaid interest is added to the loan balance, causing the loan to get bigger. This leads to a larger monthly loan payment when the borrower begins repaying the loan. Effectively the borrower will be paying interest on interest, yielding a much more expensive loan that will take longer to repay. Ideally borrowers should make payments of at least the new interest that accumulates each month during the in-school and grace periods.

**Definitions Advertisement**  
The following definitions will help clarify the discussion of the benefits of making payments on a loan during the in-school deferment period. The principal balance on a loan is the amount of money borrowed. The loan balance is the amount of money still owed on the loan. Interest is a periodic fee charged to the borrower for the loan. The interest is usually expressed as a percentage of the current loan balance. If the borrower does not pay the interest as it accrues, the interest is capitalized. This adds the interest to the loan balance, increasing the amount owed. Accrual refers to amounts, such as interest or other fees, that accumulate or are charged during a period of time and which are not paid by the end of the period. A deferment is a period of time during which payments are not required. Interest, however, continues to accrue on unsubsidized loans during a deferment and will be capitalized if not paid. The interest on a subsidized loan is paid by the government during a deferment. A forbearance is a period of time during which payments are not required. Interest, however, continues to accrue on both subsidized and unsubsidized loans during a forbearance and will be capitalized if not paid. With a subsidized loan, the government pays the interest on the loan during an authorized deferment, such as the in-school deferment or the economic hardship deferment. With an unsubsidized loan, the interest continues to accrue during a deferment period and is not paid by the government. Negative amortization occurs when the payments on a loan are less than the interest that accrues, causing the balance owed on the loan to increase. Interest capitalization is a form of negative amortization. However, this benefit comes at a significant cost. During the deferment any accrued but unpaid interest is capitalized by adding it to the loan balance. The capitalized interest causes the size of the loan to increase, leading to much larger monthly payments after the deferment is over. Longer-term deferments are more problematic. The longer the deferment, the more the debt grows. It is much better to make payments, even small ones, during a deferment period. Ideally these payments should be at least the new interest that accrues. This will prevent the debt from growing larger during the deferment. Interest-only payments on a Federal unsubsidized Stafford loan will typically be about half the full monthly payments on a year term. Interest-only payments, however, are not a permanent solution, as such payments will make no progress in retiring the debt. Increasing the term of the loan is another way of reducing the monthly payments. But because the payments exceed the new interest that accrues, the borrower will make some progress in retiring the debt. Of course, the less you pay per month, the longer the repayment term and the higher the cost of the loan, because a longer repayment term increases the total cost of the loan. For example, increasing the term on a Federal unsubsidized Stafford loan from 10 years to 20 years will more than double the interest paid over the life of the loan, increasing it by a factor of 2. The interest rate on the Federal unsubsidized Stafford loan is 6. Thus deferring the interest during the in-school and grace period increases the loan balance at repayment by about 100%. On a year term the total payments increase by 100%. On Federal PLUS loans and private student loans the added cost of deferring the interest is even higher due to the higher interest rates.

**How to Avoid Negative Amortization**  
The best solution is to make payments of at least the new interest that accrues during the in-school and grace periods. Although interest-only payments are not as good as making full payments of principal and interest, interest-only payments are better than deferring payments of both the principal and

interest. Payments that are at least the new interest that accrues will prevent the loan balance from getting bigger. There are no prepayment penalties on federal and private student loans, so you can make interest-only payments during the in-school deferment and grace periods on any student loan, even if the lender does not require in-school payments or have a formal interest-only payment option. It is best to include a note with the payment asking for the payment to be applied to the principal balance of the loan. Also, if you have both subsidized and unsubsidized student loans, you should specify that the extra payment should be applied to the unsubsidized loans. Some lenders offer loan programs in which payments are required during the in-school and grace periods. Since the balance at graduation is lower, the Smart Option loan can use a shorter repayment term without increasing the monthly payment too much as compared with a loan that deferred payments of principal and interest during the in-school period. Borrowers of the Smart Option loan will save a lot of interest and pay off their loans sooner than borrowers that do not make payments during the in-school period. Several of the state loan programs also require interest-only payments during the in-school and grace periods.

### Chapter 7 : Gumutindo: Growing Toward a New Gender Balance | WIEGO

*Gumutindo: Growing Toward a New Gender Balance Halfway up Mount Elgon, a bumpy hour's drive from the busy centre of Mbale in eastern Uganda, the women meeting at the Konokoy Organic Coffee store are unabashedly cheerful.*

The gravity thing is really interesting! If I remember correctly different types of auxins have different influence anyway. But the specific function I was thinking of is indeed inhibitory. Konrad has touched on it in his answer. The reason trees, and most plants, tend to grow equally in all directions is that they have iteratively generated branching and radial symmetry which is controlled in a feedback loop of the growth promoting hormone auxin and auxin-sensitive auxin transporters. This is an elegant biological algorithm which explains all branching growth. The things Konrad identifies phototropism, gravitropism, etc. There are exceptions, as others have pointed out in their answers, and they usually result from severe imbalances in the orientation cues. Auxin is a plant hormone actually a class of hormones, but mostly when people say auxin, they mean indoleacetic acid which promotes cell elongation and division. The basic principle which allows auxin to act in the organising way it does is that auxin is produced inside cells, and proteins which export auxin from a cell develop on the side of the cell which has the highest auxin concentration see figure below. So auxin gets transported up the concentration gradient of auxin! Thus if you get an area of high auxin concentration developing somehow, more auxin is then transported towards that area. For most of the life of the plant, auxin is produced pretty much equally in most cells. However, at the very early stages of embryo development, it gets produced preferentially along the embryonic axis see figure below, part 1. That creates a meristem - a group of cells where cell division is taking place - at the auxin maximum at each end of the embryo. Since this particular meristem is at the apex of the plant, it is called the apical meristem, and it is usually the strongest one in the plant. So by having a meristem at each end, the embryo then elongates as cell division is only taking place at those points. This leads to part 2 of the image above, where the two meristems get so far apart that the auxin gradient is so weak as to no longer have its organising effect area in the red square. When that happens, the auxin produced in cells in that area concentrates in a chaotic way for a short time until another center of transport is created. This happens, as the first one did, when a particular area of the tissue has a slightly higher concentration of auxin, and so auxin in the surrounding tissue is transported towards it. This leads to part 3 of the figure, in which two new meristems are created on the sides of the plant called lateral meristems. Lateral meristems are where branches occur on plants. If you then imagine this process continuing to iterate over and over, you will see that the branches, as they elongate, will develop meristems at the tips and along the sides. The main stem will also continue elongating, and develop more lateral stems. The root will begin to branch, and those branches will branch, etc. If you can understand how this elegant system works, you understand how plants grow, and why they grow in repeating units as opposed to in a body plan like animals. It also explains why, if you cut off the tip of a stem, it promotes branching. By removing the apical meristem, you get rid of the auxin gradient and enable the creating of multiple smaller meristems which each develop into branches. Imagine taking a cross section through a stem and looking down all the way through it as depicted crudely above. Just as auxin gradients act to coordinate growth along the length of the plant, they also coordinate it radially, as the maxima will tend to space themselves out as far from one another as possible. That leads to branches growing in all directions equally on average.

### Chapter 8 : Mary Kearns (Author of Growing Toward Balance)

*The balance is totally random, if you see a tree that is leaning, it may be because of weak soil, heavy crown, or even a lightning strike. A strong soil and even crown will usually make it straight as an arrow.*

### Chapter 9 : The Human Balance System | Vestibular Disorders Association

*While the overall balance of leaned party affiliation has not changed much in recent years, this is the first time since that*

## DOWNLOAD PDF GROWING TOWARD BALANCE

*as many as half of registered voters have affiliated with or leaned toward the Democratic Party.*