Analogy

There is a relationship between the terms one and two on the right. Select a fourth term whose relationship to the third term is the same as between the first two terms.

1. Nutrient : Feed Source Nutrient : Feed Source Carbohydrates : Corn Fats : Amt. of energy yielded Carbohydrates : 1 Fats : Amt. of energy yielded Arrangement

The following represents a group of energy-yielding compounds – rearrange them in order from the most simple to the most complex chemically.

| Cally | Call

Association
Each of the following items have something in common. Place in the space provided a word or phrase which will identify their common property

Understanding

Listed are some effects of certain actions or processes. Place a word or words in the blank at the right that causes these effects.

1. Energy is released from nutrlents resulting from cellular metabolism ______.

2. Digestion of cellulose by ruminants_____

The recurrence of the same general ideas from one short-answer examination type to another appeared to broaden the student's understanding of the subject matter. This conclusion was based upon the fact that the responses to short-answer essay questions were generally concise and clear, and much improvement was noted in comparison to previous years when no such effort was made to recall information relating to basic principles when preparing short-answer questions. It was observed that all students appeared to read the questions carefully and review the examinations rather thoroughly, prior to submitting their papers. Only a few careless mistakes were noted. Students were observed to relate to a previous question or questions when mak-

ing the most immediate response. It was further noted that some questions which were initially answered incorrectly were apparently changed to a correct answer as the student reflected back to a previous question. Apparently it was obvious to most students that the examinations contain the recall feature; however, it was not specifically called to their attention prior to, during, or after the examination. However, at the end of the course, more than one-half of those students unsolicitedly responded with favorable comments stating that the examinations given throughout the term stimulated them to study much more than they would otherwise have done.

The final examination for each term was designed only to test, and the reference feature from question to question was not included. Most students responded with answers ranging from acceptable to excellent on short-essay discussion questions indicating that they had learned rather well some basic information. Preliminary results indicate that students who have taken the introductory animal science course, under the examination procedure as outlined, have enrolled in sophomore and junior level courses with a broader base of retained facts and principles than was indicated prior to the initiation of the recall or reference type examination.

The time involved in the preparation of these examinations is much greater than for a conventional random-type examination; however, there is also some reward for the teacher in that it can enhance professional growth. There is a greater need for thinking through instructional objectives prior to lecturing and preparing the examinations. It is also possible that the teacher could be greater challenged to give current attention to the subject matter presented.

It is not likely that we will ever reach perfection in the teaching-learning relationship, yet we should always strive toward that goal.

No test is completely reliable and there is always a certain amount of error, even in the best test administered under ideal conditions yet both teacher and students must have some means of measuring progress. Since there is so much at stake in testing it appears that the testing phase of teaching should not be slighted and I'm convinced that we as college professors need to give test preparation more attention now and in the future than apparently we have in the past.

SO YOU WANT TO BE AN ADVISER*

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*The following treatise was written in response to a young and inexperienced college professor's plea "Will you tell me what I should know and do to advise college students."

I wonder if you really do want to advise students. It demands a tremendous investment of self. You must be prepared to put your students' interests above yours much, if not all the time, to maximize your efforts. Rotary International's motto of "Service above self" fits the attitude you must assume.

Why this kind of dedication? There are many important things to do and they demand your best inputs. The student must be evaluated. He must be seen for what he is; what he hopes to be; along with the physical, academic, and emotional equipment he has to accomplish his goals. Going one step further you must appraise the realism of his goals to determine whether they are worthy of him. This is not easy and you will frequently wonder, "Am I seeing the picture — am I really able to judge accurately?" Complete dedication to understanding your student is the only avenue open — all else falls short.

How do you get the rapport with students to learn these

things? It takes time and many kinds of attributes and skills on your part. Let's look at a few:

The biographical sketch — Your first contact with the freshmen advisee can take place prior to his arrival on campus. Upon learning that he is coming send him a carefully prepared biographical sketch outline. This will do at least two important things. One, it tells the boy in a positive manner that you want to know about him, and secondly his parents will know someone cares about their son.

Causing the student to spend time preparing information about himself before he gets to college gives him the opportunity to think in terms of relating to you. This is important because when he gets to college he believes he already has one person to whom he can relate. In other words he feels he has a friend in this New World and that is vitally important to him at this stage of his thinking.

You should not brush off lightly the parental attitude toward your overture of friendship. Consider what parents are doing — they are literally losing their child. They know it, even though

the student does not realize he is leaving home — probably for good. His ties are breaking and only mother and dad appreciate it. All their parental training of character, etc., are on the line for "our youngster is nearly on his own now." At this point all they can do is love, finance and hope.

Your letter requesting biographical information so you can get to know him better will usually be received by parents as manna from heaven. A wave of relief will pass over mother and dad for they suddenly realize that junior does not have to face all the big unknowns without the warm assistance of someone who also apparently cares at least a little about him. They will look to you as taking their place.

The alerting parents of your interest is not without an element of risk. I feel sure that some parents might overdo the bit about, "Now son, you go right to your adviser's office the minute you arrive." Such pressure could provide some negative results as well as positive, but I have not experienced it. With the proper phrasing of the letter, parents and son could be made to understand that this invitation is a personal thing and that while we all respect parental interest this is a matter strictly between student and adviser.

Hopefully the biographical sketch will identify the student's hot button – that which turns him on. Once known, all you have to do is mention the subject or subjects and listen. I repeat an earlier statement that usually the student's interests will center about home. You should be conscious of this even though most students will not. Time – This is a "biggie." Priorities need to be assigned. If you are inclined to put students' needs first, you will make it. Conversely, if you find yourself placing a greater emphasis on other things such as research, administration, committee assignments, teaching, extension, etc., then you will not achieve to the highest level possible.

You will need to make yourself available to students when they need you. This sounds like a tremendous assignment and make no mistake about it – it is. The rationale for this is that your students will come to you for all kinds of assistance if they know that you will be available. I like to draw an analogy between the student visiting his adviser and your need to contact your family M.D. If it's that bad, you need help immediately not later. If you are instructed to make an appointment for a later time, you may be dead. Also, if you don't get help from your family doctor it is imperative to find another. So it is with students, especially boys. Boys in need of help want it now – not within the next hour, not the next day, the next week, but now. Girls may respond similarly, but my experience with them has been limited. If you do not make it indelibly clear that you are always available to your students they will seek other sources of help and you will have lost your chance. Usually and unfortunately you will probably not have another without making a great effort.

So if you want to accomplish the most, make sure your advisees know that anytime they want to talk to you they may come to your office or call you at home. Tell them (and mean it) that if you should be involved to the degree that you simply can't extricate yourself at the time, you will call them the instant you are free. If that is likely to be a very long time and the student's need appears especially urgent, you may suggest temporary alternatives. This will work only if you have already built a strong feeling of trust between you and your advisee.

Establish rapport — If you let the student know that you are really interested in him you will have an opportunity to get to know him well and hopefully learn what makes him "tick." Here again I caution you that doing a haphazard "quickie" job is sure to result in failure. You must like him, you must believe in him, and he must be made to realize this beyond question.

The matter of liking or being compatible can be a serious problem. There may come a time when you discover an advisee that you cannot seem to like no matter how hard you try. "Like" really isn't the word — it's "love." Not the man-woman type of love but love of fellow men. It is important that you really build up a feeling of fatherly or brotherly love for him. Students will know if it's there and so will you. Consider again the

student where this seems impossible. Don't fret over it for some people do not "hit it off" very well. The best two approaches open to you is to do your best under the circumstances or arrange his transfer to someone else. Personality clashes will show up occasionally so expect them for they are normal. This should not cause you to feel like a failure because you were not able to work with student X as you did with the rest of your students.

Establishing rapport can be accomplished by several means. In the first place, rapport implies friendship and trust. For a starter ask him questions upon which he is an authority. He will usually respond readily. Freshmen will relate quicker than upperclassmen.

A freshman is usually a confused or at best an uncomfortable person. If he has come from a farm or ranch or even a small town and is away from home for the first time, he misses the things of home more than most of us can imagine or remember. He misses the sounds or perhaps the quiet of home, the landscape, the smells, the little and almost unnoticed things which made up his whole world up to now.

To attend college he has been uprooted and placed in a new, scary, rather mysterious sort of unfriendly and very confusing situation with hundreds of others in his own peer group. Is there any wonder he's uncomfortable? Remember home probably spelled comfort and security. How hard we all seek these two goals! Our student has had to give up both of these at the same time for something new and uncomfortable. The adjustment may be painful.

Everyone becomes nakedly uncomfortable when he has nothing familiar to cling to. A freshman in this plight needs a friend urgently. He is ready to reach out to anyone who shows interest in him. This is your opportunity. You will never be able to find him more receptive so it is propitious to move ahead expediently.

The secret to establishing rapport at this stage really isn't a secret but so obvious it sometimes escapes detection. Begin your establishment of a trust relationship by asking him about home. Most boys will talk for hours telling you about their past experiences — what, where, and how, Can you think of a better spring-board for getting something started?

You must remember, too, that all this is predicated on your ability to question, to listen, and to learn from him.

He is not much interested in your experiences yet. He wants to impress you with his importance as he sees himself. This is your golden opportunity for he is fresh and eager at this stage.

The more college experience the student gains, the more reticent and guarded he becomes. He is hard to know. His college experiences overshadow the old of home. In short, he has become comfortable and does not need the balm of thoughts of home as he once did. With upperclassmen the interest scene shifts and you must determine what this is. It may be careers, girls or hundreds of other possibilities. Finding the key can be difficult and accentuates the difference between working with freshmen as opposed to upperclassmen.

The only time you may "profitably" tell him of yourself is to support his beliefs by indicating that you feel the same way or that you too have shared the same experience. These techniques must be carried out tactfully for the goal is to get him to talk himself out — not you. Once he finds out that you have listened and have been concerned and possibly even shared similar experiences, you and the student are on your way to a pretty good understanding. You have the foundation for building much greater rapport and the establishment of trust.

Confidentiality is important in establishing a trust relationship. No meaningful relationship can be established unless the student knows his conversations are personal and will go no further. There are exceptions to this. He will delight in having others know good things he has done and that have happened to him. You can expose this kind of information with reasonable confidence. So remember what he tells you is in confidence except for praiseworthy items. (Warning! Mentioning these might occasionally be risky with some students. You must be

discerning, and not overinflate egos).

Real deep meaningful rapport and trust can seldom be established in one meeting. You must arrange for repeat opportunities to talk. Perhaps at this juncture I should call to your attention that all this investment of time is predicated on the assumption that your administration supports this kind of behavior. My advice is that if it does not, you had better change schools where the administrative attitude is favorable to this kind of student attention or be prepared to suffer anonymity as far as praiseworthy and/or monetary rewards are concerned. Of course, another approach is to learn the rules of your boss's game and play ball accordingly.

Additional or follow-up meetings with students do not happen spontaneously, you must "set them up." This should not be difficult especially if your first visit was a good one. The agenda of the second visit will ostensibly be determined by questions and unsolved problems surfaced during the first.

If you have few students to advise, you will remember all the details about each or enough of them to take up where you left off the last time. If you have many advisees you may wish to make notes. There is some hazard in this because your advisee might become suspicious of you. On the other hand if you decide to do this, tell him you'd like to do this for your own benefit and that the notes are strictly confidential and will be kept in his file. You can assure him that his file is his property stored in your office and available to him anytime he might wish to see it or discuss it. In this way he will generally accept your keeping records of his visits. I want to repeat for emphasis sake that most of the time this kind of action should be unnecessary because one usually does not need to make notes on people he knows well.

Building a friendship — There is no fine line between the establishment of rapport and the building of a true friendship. Friendship is a relationship developed between two people where both make investments of themselves in the other because they want to and are better because of it.

These relationships are the finest and of course represent true brotherly love. You will for him what he wills for you. It is also very likely to have lasting qualities. There is neither the time nor the meshing of personalities to expect them to develop with many people. It will happen more often when you will have done some things for the student which he views as highly personal and much above and beyond his expectations of you.

The things you can do to expand the breadth of a relationship varies and covers a wide scope of human relations. For example, you may be successful in helping him obtain a job he wants very much; you may help him map out a strategy for courting that special girlfriend; or you may help him with some other very personal and intimate problems. Whatever you do you should be aware and alert to your limitations. As an academic adviser you are not a trained clinical psychologist and should therefore not attempt to act and practice like one. Instead, help your student to recognize that the help he may need is beyond your ability but point out that trained help is available in the school's counselling service. Show your appreciation for it by knowing something about it. It would be especially helpful if you were acquainted with someone in the counselling service to whom you could refer him. If he will permit it, call and make an appointment for him in his presence. His visit to the counsellor will have your stamp of approval. It will help bridge the gap between someone he trusts (you) and the next person he is to trust.

Results — Something has to happen as the result of your experiences with advisees. The results are testimony of the degree of success, failure, and/or mixture of the two in establishing relationships. I have selected a few cases representing both success and failure. I offer them as experiences and not examples. The good experiences were exceptional and I offer them as factual and in light of Will Rogers philosophy, "If you have done it, it ain't bragging."

The examples cited are only a few from many and hopefully represent a cross-section of opposite ends of the spectrum of what has happened between students and me over 25 years of trial and error.

CASE 1.

A farm boy entered college against his wishes. He had experienced some disciplinary reprimands in high school and had failed one subject. He was unsure of himself and his future. In today's language we would say he was searching frantically for his identity. Because of his fear of failure he studied diligently. The result – his first semester's grade average was 8 out of a possible 9 on the stanine scale.

We spent many hours together visiting about his future. I learned he possessed great quantities of human relations capital and needed a place for investing it. I encouraged him to use this trait and was successful in getting him to participate in one of the projects of the Nebraska Human Resources Foundation. In this he became the counsellor of a high school youngster and was outstandingly successful carrying out his charge of shaping the student's attitudes and subsequent actions.

His success as a counsellor provided him with much needed self confidence. This personal development made him a person that his Fraternity brothers looked to for advice because he showed genuine interest in their individual problems. Everywhere he went, both in and out of school, he left a trail of tremendously impressive friendships.

By now you are probably wondering what does this have to do with advising. The answer is simple. By befriending a frightened boy he caught fire and developed some of his potentials. He was encouraged to explore his opportunities and they appeared feasible to him. His successes simply acted as fuel to do more, better, and bigger things.

A relative of this advisee informed me of a significant but unexpected benefit resulting from the close relationship between the advisee and me. Prior to the son's enrollment in college the father was openly negative to the university's budget requests. This attitude was completely reversed by the son's favorable reports on his advisee-adviser experiences. It is obvious then that the results of empathy are unpredictable.

There was nothing special in this student-teacher relationship beyond the fact that we got along exceptionally well (and still do). The student achieved far beyond both his and his parents' expectations. They gave me most of the credit, but in reality all I did was to become an interested and concerned friend. See how simple but rewarding advising can be? CASE 2.

One of my greatest challenges was a student who was mature far beyond his chronological age. As he advanced he puzzled me even more because he was superior in so many ways that I honestly wondered who might be advising whom.

I was at a loss to know what I might do to help him. One day I hit upon the idea of encouraging him to accept challenges commensurate with his abilities and competitiveness. It was a simple solution and it worked.

School became a game for him. Having no problems with academics he added another ingredient — experiences in the manipulation of people. This manipulation was for good and wholesome purposes.

He was usually successful in his working with people and especially adults. Because of his successes and mature approaches he and his peers had difficulty in bridging the gaps of understanding. It was not until he was a senior that he began to work toward the problem of relating to his own peer group. His successful relationships with his classmates came too late in college as he was never elected to the mens' select honorary Innocent Society even though he appeared to have had qualifications which exceeded those of many who were elected.

He is still involved in academia. He is working toward an advanced degree in people management to achieve better use of natural resources. From correspondence with him I feel sure that some highly qualified people are scratching their heads and wondering as I did, what can I do for him

What was the adviser's role in this case? First, there was friendship—real concern. Then there was encouragement to dare to achieve his dreams and to discover newer and greater horizons. He did all these largely by himself as all he got from me was encouragement. Apparently this was what he needed. I feel very humble and rewarded because I believe I was privileged to work with someone who will become one of the future greats in the field of natural resources management. You might be interested to know that I will send him a copy of this. He knows how I feel about him but repetition will hopefully result in an appreciated and supportive fuel to additional accomplishments. Advisers should remember that we all thrive on praise but will wither quickly and die from the lack of it. I am hopeful he will be the better for these comments—I know I am. CASE 3.

A farm boy entered college afraid that he would fail. He had been a mediocre high school student. At the end of the first semester in college his grade average was 8.0 out of a possible 9.0. He continued to obtain good grades through all subsequent semesters. As he progressed through his years as a student he became moody and finally during his senior year he began to withdraw.

This attitude continued and he endeavored to withdraw completely from everything and everybody excepting me. Withdrawing in a social fraternity should not be easy but he did it. As he began to share his thoughts I became distrubed by his attitude. One day he closed and locked the door to my office and broke down and sobbed. He was apparently in a deep depression and finally confided that he thought that suicide was his only solution to an unidentifiable impasse.

What would you do in a situation like this? I had had no experience upon which to draw, but insisted that he contact me immediately whenever he felt this way (day or night). He did and I expect that if I had recorded the time we spent together it would at least be 80 hours. This is a

lot of time to "find" over a 21/2 month period, but a fine young man needed it and he got it.

I tried to reason with him but soon learned that reasoning was not in his present make-up. I tried to get him to pin down the problem or prob-lems but he wouldn't or couldn't. During this time I was frantically seeking advice from all the psychologists I knew. All attempts to get him to confer with professional psychologists and psychiatrists failed except for one brief visit to the health service.

My psychologist friends told me, much to my surprise, that people who actually commit suicide will talk about it beforehand, while those who do not seldom take their lives. I was told too, that it is a frame of mind that can be triggered by various things but especially disappointment in one's self to carry out an objective to completion. I was told to continue talking and talking and talking for that was the only hope. This I

As time wore on and our meetings continued behind locked doors I hit upon an idea. It was spontaneously executed without thought on my part and I recognize now the risk I took. I pounded the desk with my fist and asked in an angry voice "What kind of ungrateful pup are you? Why do you suppose you have 40 acres of land in your name? I tell you, it is because two people love you very much. Why do you suppose you have a new car to drive? It's because those same two people love you that much. Why do you suppose I have spent hours with you talking about your problems? It's because I too love you. And you, to repay our love are willing to take a shotgun to yourself and let us hold the bag. If you want to show your love and affection for us, you will get busy and live up to your abilities and our belief in you.'

This outburst produced a startling effect. His eyes became dry and big as dollars. He just stared at me and we were both quiet for a long time. Suddenly he stood up to leave and said "You've given me something to think about." As he was leaving I tried again to reinforce him by reiterat-

ing that a lot of us really do care.

Evidently he believed, as he got over his problem, obtained a Master's degree and entered the army as an officer. He married, has two children, is happy and confided in me a few years ago that he doesn't have "those old problems" anymore.

All I did was to give him attention - a lot of it. My psychologist friends say it probably saved his life. Whether it did or did not, it was a tremendously sobering experience. I think I realized for the first time that one can rarely spend too much time with a student.

The foregoing have been success stories. All student-adviser relationships I have experienced have not been so successful. While there have been many so-so experiences (they should have been better) there have been some great disappointments too. The last three fall into the unsuccessful or failure category. CASE 4.

An adopted son of a successful professional man was enrolled as an advisec of mine. The boy was very talkative, cocky and apparently insecure as he talked about himself incessantly. He was unsuccessful in being pledged by fraternities and this disappointed him.

Studies and his lack of self-discipline did not mix. He was placed on scholastic probation and eventually dropped as a student. Later he convinced the University of his sincere interest in pursuing an education again

and was permitted to re-enroll.

At the beginning of his second start his father solicited my help and we visited about the boy. I volunteered to spend time with the boy. We visited both in my office and on hikes in the woods. I tried to get him to share his innermost thoughts, but the closest was that he wished to become a gunsmith. I visited with an adult whom he called his friend and learned that girl interests occupied the majority of his thinking. I could not offer him any acceptable substitutes for his success with girls, and the result was a repeat of previous school experience except this time he dropped out.

My assessment of this experience is failure to do the right thing at the right time. It is conceivable that he should not have been in college at all. I should have been able to know him well enough to have helped him and his family accept this possibility. Frankly, I do not know what would have done the job. I offered to meet the father and son for lunch and visit about common things but that never happened. I judge the father must have been too busy. May be I am using the father as an excuse when I should have been able to accomplish without him.

The lesson from Case 4 is that one cannot score a success every time. No one has the ability to build meaningful interpersonal relationships with everyone. A try is all one can do. If it fails, go on to others hoping they will be more fruitful. CASE 5.

One of the most academically talented students I have known was assigned as my advisee. Apparently he was an achiever in everything he attempted. I was elated over the prospects of working with him.

I aided him in obtaining a fabulous summer job with the U.S. Dept. of the Interior prior to college enrollment. It was an exceptionally singular experience of a lifetime and he was elated and grateful. Upon registration we became friends quickly and talked frequently, openly and easily. One day he said "It's strange, but I'm telling you lots of things I've never told or talked to my dad about." I recall that statement because it was a signal of having gained his confidence.

His academic and social successes were outstanding. During this time he decided to change his major so our close association was lost. He became politically important in student government and the leader of nearly every organization to which he belonged.

Eventually he renounced his seat as a student senator and became an outspoken dissident. This was followed by marriage and moving to Canada

to escape military service.

I think I failed to help this fellow recognize his opportunities for service both in and outside the university societies. He could have become an achiever to bring his peer group and those of the so-called establishment together. I endeavored to get him to accept the philosophy that young folks must share their thoughts and efforts with the "establishment because tomorrow they will be the establishment. I feel that in the two years I "had him" I didn't challenge him properly or adequately even though our rapport was exceptional.

Picture an academically poor to mediocre high school city boy. The greatest recollection I have of him was that he would not let me know him. Try as I would he would not spend any time with me.

At registration time I would endeavor to point out the course sequences he should be taking as indicated by the prerequisites. To all my suggestions he was blustery, defensive and had things worked out to suit

Eventually he graduated and got a job. He still holds it and I understand very ably. Several years after graduation we were talking and he volunteered that while in school he was the guy who knew all the answers and should have had his rear kicked for not listening to his adviser. "I am paying for my arrogance now, as there are some courses I need which you advised I take.

Why couldn't I get his confidence? I do not know. We didn't communicate well. I have no suggestions as to how long or how hard to try "to crack the tough ones." It's ironical but a chance remark is all it takes at times and you are buddies. I did not find his hot button.

SUMMARY

College student advisers hoping to offer advisees maximum enhancement opportunities must be prepared to make significant investments of self. This means giving unstintingly of time to permit the establishment of rapport leading to the building of trust relationships and warm friendships. To achieve the foregoing the student must be given opportunities to express his interests, accomplishments and aspirations. This can be done by private confidential interpersonal conferences.

Nearly all students want personal attention and will accept it gratefully. Most sincere efforts to effect student enhancement will be successful but in varying degrees.

Zoecon Corporation Submits Application For IGR

Zoecon Corporation has submitted its first application to the Environmental Protection Agency for registration of an insect growth regulator according to Dr. John Diekman, Zoecon's Manager of Toxicology-Regis-

This initial application is for an experimental permit to allow test marketing of ALTOSIDTM SR 10 insect growth regulator (IGR) for control of mosquito emergence from breeding sites. ALTOSID insect growth regulator is the first of a new class of insect control substances that Zoecon expects to have a major impact on the market because of the products' non-persistency and relatively low toxicity to all animals. The designation SR 10 indicates a Zoecon developed special slow release micro capsule formulation that enables the rapidly degraded active ingredient to act effectively over a period of a week.

Simultaneous with the experimental permit application, Zoecon also submitted a petition for a temporary negligible residue tolerance for ALTOSID insect growth regulator on the basis of substantial toxicological and biological studies that have been performed. The tolerance approval is

necessary because some of the first applications of ALTOSID will be for mosquito control in flood irrigated pastures and rice fields and assurance is required that any residues on food products will not constitute any hazard to the eventual consumer.

Dr. Diekman indicated that the experimental permit and temporary negligible residue tolerance would permit greatly expanded commercial scale field trials in addition to the test marketing. These steps are the first important events leading toward full registration by the EPA and full scale commercial marketing. Additional applications for use of ALTOSID IGR and applications for other IGRs may be expected as Zoecon continues to develop this range of products. Dr. Diekman stated that approval of the

initial applications may not be expected for several months.

Zoecon Corporation is already marketing a line of PHEROCONTM insect sex attractants and traps that have proven successful in measuring insect pest populations and thereby permitting planned usage of pesticides with both cost and environmental benefits to farmers.