

Argument 185 Saving water at the **Sunnyside Towers**

In this letter, the owner of an apartment building concludes that low-flow shower heads should be installed in showers on all 20 floors of the building, for the purpose of saving money. To support this conclusion, the owner cites the fact that since installing low-flow heads in showers on the bottom five floors only a few tenants have complained about low water pressure, and that no other problems with showers have been reported. However, this evidence provides little credible support for the owner's argument, as discussed below.

In the first place, the argument depends on the assumption that installation of low-flow heads on the first five floors has resulted in lower water costs for the owner. However, this need not be the case. It is equally possible that tenants on these floors compensate for lower flow by either taking longer showers or by opening their shower valves further than they would otherwise. It is also possible that water pressure, and therefore water usage, on the remaining floors has increased as a result. It is even possible that during the month since installation many of the tenants on the bottom five floors have been absent from the building, and this fact explains why few tenants have complained.

In the second place, the owner ignores possible indirect consequences of installing low-flow shower heads on all 20 floors—consequences that in turn might adversely affect the owner's net operating income. For example, the more low-flow installations the more likely that one or more tenants will become disgruntled and vacate as a result. In fact, the owner has admitted that at least a few tenants have complained about these new shower heads. High tenant turnover might very well serve to increase the owner's overall operating costs.

In the third place, in order to reasonably conclude that low-flow heads will reduce total water usage in the building the owner must assume that other water uses will remain constant in the future. However, this will not necessarily be the case. Perhaps the water supplier will raise rates, or perhaps current tenants will be replaced by other tenants who use more water. Without ruling out such possibilities the owner cannot justifiably conclude that his total water costs will decrease after installing low-flow heads in every shower.

In conclusion, the argument is unconvincing as it stands. To strengthen it the owner must provide clear evidence that the use of a low-flow shower head in fact reduces total water usage. To better assess the argument we would need figures comparing water usage before and after installation. We would also need to know how many of the bottom five floors were occupied since the new heads were installed, and whether the tenants on these floors are likely to use more or less water than tenants on the upper floors.

Argument 187 Preventing depression by eating more fish

The author of this article asserts that people who live in the U.S. should increase their fish consumption in order to prevent depression. To support this assertion, the author cites the fact that our ancestors, who were less likely to experience depression than we are today, consumed more omega-3 fatty acids, which help prevent depression and are found in some fish and fish oils. The author also cites the fact that in modern societies where people eat more fish than we do the reported incidence of depression is comparatively low. However, the author's reasoning is problematic in several critical respects.

The first problem with the argument involves the comparatively low incidence of depression a-

among our ancestors. The author assumes that no factor other than the ingestion of omega-3 is responsible for this lower incidence. However, it is entirely possible that environmental or other dietary factors are instead responsible for the lower incidence. For example, perhaps other substances common in the U.S. diet today, and which promote depression, were not part of our ancestors' diets.

Another problem with the argument involves the low incidence of depression reported among today's fish-eating societies. To reasonably infer a causal relationship between fish-eating and low rates of depression in these societies, two assumptions are required. The first is that the types of fish consumed in these societies in fact contain omega-3; however, the article provides no evidence that this is the case. The second assumption is that the reported incidence of depression accurately reflects the actual incidence. However, it is entirely possible that in those societies people generally do not report depression.

A third problem with the argument is that it assumes that omega-3 is only available in fish. However, the author provides no evidence to substantiate this crucial assumption.

Perhaps people can ingest omega-3 by taking fish oil capsules rather than eating fish. Or perhaps omega-3 is also found in other foods as well. In either case, the author cannot reasonably conclude that we must eat more fish to ingest omega-3 and thereby help prevent depression.

Finally, in concluding that people in the U.S. must ingest more omega-3 to prevent depression, the author infers that this is the only means of preventing depression. This reasoning is fallacious. There might be a myriad of alternative ways to prevent depression; moreover, experience and common sense informs me that this is indeed the case.

In conclusion, the argument is unconvincing as it stands. To strengthen it, the author must provide clear evidence that no other factors explain the comparatively low incidence of depression among our ancestors. The author must also show that in modern fish-eating societies people in fact ingest more omega-3 than people in the U.S. do, and that the incidence of depression is in fact lower in those societies. To better evaluate the argument, we would need more information about alternative methods of preventing depression and alternative sources of omega-3.

Argument 189 How to increase enrollment at **Foley College**

The dean of Foley College claims that by guaranteeing prospective students that they will obtain jobs immediately upon graduation Foley can increase its enrollment and more effectively compete against more prestigious schools. To support this assertion the dean claims that students who commit early to a course of study and are guaranteed eventual employment are more likely to complete that course work and will be better prepared for the future. On several grounds, however, the dean's argument is unconvincing.

First of all, the argument assumes that providing this guarantee will in fact result in increased enrollment. However, the dean provides no evidence that this will be the case. It is entirely possible that the sort of student attracted to Foley in the first place would not find such a guarantee a particularly enticing feature. In fact, since Foley is a liberal arts college its students are more likely to be interested in graduate-level study rather than immediate employment upon graduation.

Secondly, the dean provides no support for the claim that because of the proposed guarantee Foley students would be more likely to successfully complete the course work they choose as entering freshman. To the contrary, experience and common sense inform us that while in college students of-

ten change their minds about their best career direction. Accordingly, by requiring an early commitment to a course of study Foley might be doing its students a disservice in terms of helping them select the course of study that they are most likely to complete successfully.

Thirdly, the dean provides no support for the final conclusion that the earlier a student's commitment to a course of study the better prepared the student will be for the future. It is entirely possible that exploring diverse options during the first year or two of college is a better way to prepare for one's future—by providing the sort of well-rounded education that one might need for career flexibility. Without addressing this issue the dean cannot justifiably conclude that the proposed guarantee will better prepare Foley students for the future.

In conclusion, the argument is unconvincing as it stands. To strengthen it the dean must provide statistical evidence that college students who commit early to a course of study or who are promised eventual employment in that field are more likely than other college students to succeed in college and in their careers. Finally, to better evaluate the argument, we would need more information about why prospective students apply to Foley in the first place.

Argument 190 Advance ticket sales for **Glenville's** concerts

This letter recommends that Glenville feature modern music, especially the music of Richerts, at its summer concerts in order to boost advance ticket sales and attendance. To support this recommendation the letter's author points out that advance ticket sales have declined over the past few years, but that unpredictable weather cannot be the reason for the decline because "many people attended the concerts even in bad weather". The author concludes that choice of music must be the reason for the decline, then reasons further that since Richerts' recordings are very popular among Glenville residents featuring Richerts' music at the concerts would boost ticket sales and attendance. I find this argument to be logically unconvincing in several respects.

As a threshold matter, the author unfairly equates the number of ticket purchasers with the number of tickets purchased. The author ignores the possibility that the average number of tickets sold to each purchaser is increasing and, as a result, the total number of tickets is not declining—or perhaps even increasing. Thus, the author cannot convincingly conclude that Glenville has a ticket-sale problem in the first place.

Even if the actual number of tickets sold in advance has been declining, the author concludes too hastily that unpredictable weather cannot be the reason for the decline. Perhaps concert attendees during the past few years have now learned from their experience with bad concert weather not to purchase advance tickets again. Besides, the mere fact that "many people" attended concerts in bad weather proves nothing unless the author can show that total attendance has been lower in bad weather than in good weather.

Even assuming unpredictable weather is not the reason for the decline in advance ticket sales, the author falsely assumes that the decline must be attributable to choice of music. This "either-or" argument is fallacious in that it ignores other possible causes of the decline. For example, perhaps during the last few years Glenville has begun its promotional efforts unusually late. Or perhaps the number of outlets where tickets are available in advance has declined. For that matter, perhaps Glenville's demographics are in flux so that the total number of residents willing and able to attend summer concerts is declining.

Finally, even assuming that choice of music is the true cause of the decline in advance ticket sales, the author fails to provide adequate evidence that choosing modern music, and Richerts' compositions in particular, will boost sales and attendance. The author unfairly assumes that people who purchase recordings are the same group that would be inclined to attend live concerts. Lacking evidence that this is the case, the author cannot convince me that the proposed course of action will bring about its intended result.

In sum, the argument is logically unconvincing as it stands. To strengthen it the author must first establish a clear causal relationship between the number of people buying advance tickets and actual concert attendance. The author must also provide evidence—perhaps by way of a reliable survey—that the “many people” who have attended the concerts in bad weather are likely to do so again despite their experience. The author must then consider and eliminate all other possible explanations for the decline. Finally, to better assess the argument I would need more information about the musical tastes of the Glenville residents who are most inclined to attend live concerts.

Argument 191 Distance-learning courses at **Xanadu College**

In this letter a Xanadu College professor asserts that the development of an extensive distance-learning program would enhance the college's reputation, as well as increase total enrollment and therefore total tuition income. To support this assertion the professor points out that in last year's trial program two traditional courses were easily adapted for distance learning. Next, the professor reasons that with more free time faculty could engage in extensive research, which in turn would enhance the college's reputation. The argument is flawed in several critical respects.

First of all, the professor's claim that an increase in enrollment would result in an increase in tuition income is warranted only if Xanadu students would be willing to pay a sufficiently high fee for distance-learning courses. However, it is entirely possible that Xanadu's distance-learning courses would not command as high a fee as its traditional courses, and that Xanadu's total tuition income would actually decline if this less-expensive alternative were available to Xanadu students.

Secondly, the professor's dual claims about distance learning—that it would enhance Xanadu's reputation and that it would increase enrollment and income—might very well be mutually exclusive alternatives. The availability of distance-learning courses might actually diminish Xanadu's overall reputation for quality education. Without addressing this issue the professor cannot justifiably conclude that the distance-learning alternative would achieve both goals.

A third problem with the argument involves last year's trial project. Despite the fact that two particular courses were easily adapted to distance learning, other courses might not be as adaptable. Common sense informs me that certain courses, especially in the arts, require hands-on learning to be effective. Thus, the professor cannot justify her claim on the basis of the trial project.

Finally, the professor's claim that distance learning would afford Xanadu faculty more free time to engage in extensive research raises two problems. First, it is possible that the time needed for faculty to adapt their courses for distance learning would equal or even exceed the time they would save by not teaching traditional classes. Second, even if a net time savings does result, the professor provides no evidence that Xanadu faculty would actually use this extra free time for research, or that additional research would in fact enhance Xanadu's reputation.

In conclusion, the argument is indefensible as it stands. To strengthen it the professor must pro-

vide specific information about Xanadu's current reputation, and provide dear evidence that distance learning would in fact enhance this reputation. The professor must also convince us that the two courses in the trial project were representative of Xanadu's other courses—in terms of the ease with which the faculty could adapt their courses to distance learning. Finally, to better assess the argument we would need a detailed analysis comparing loss in tuition from traditional-course enrollment with expected gains in tuition from distance-learning enrollment.

Argument 193 Homework assignments and academic performance

The speaker argues that if the state board of education required that homework be assigned to high school students no more than twice per week academic performance would improve. To support this assertion the speaker cites a statewide survey of math and science teachers. According to the survey, students in the Marlee district, who are assigned homework no more than once per week, achieve better grades and are less likely to repeat a school year than students in the Sanlee district, who are assigned homework every night. Close scrutiny reveals, however, that this evidence provides little credible support for the speaker's assertion.

To begin with, the survey appears to suffer from two statistical problems, either of which renders the survey's results unreliable. First, the speaker relies on statistics from only two districts; however, it is entirely possible that these two districts are not representative of the state's school districts overall. Second, the survey involved only math and science teachers. Yet the speaker draws a broad recommendation for **all** teachers based on the survey's results.

In addition, the speaker's recommendation relies on the assumption that the amount of homework assigned to students is the only possible reason for the comparative academic performance between students in the two districts. However, in all likelihood this is simply not the case. Perhaps Sanlee teachers are stricter graders than Marlee teachers. Or perhaps Sanlee teachers are less effective than Marlee teachers, and therefore Sanlee students would perform more poorly regardless of homework schedule. Or perhaps fewer Sanlee students than Marlee students actually do their assigned homework. In short, in order to properly conclude that fewer homework assignments results in better academic performance, the speaker must first rule out all other feasible explanations for the disparity in academic performance between the two districts.

Finally, the survey results as reported by the speaker are too vague to support any firm conclusion. The speaker reports that Sanlee students receive lower grades and are more likely to repeat a school year than Marlee students. Yet the speaker does not indicate whether this fact applies to Sanlee and Marlee students generally, or just to math and science students. The speaker's recommendation for all high school students might be defensible in the former case, but not in the latter case.

In conclusion, the recommendation that all high school students be assigned homework once per week at most is indefensible based on the evidence. To strengthen the argument, the speaker must show that the reported correlation in the areas of math and science is also found among most other academic subjects. The speaker must also rule out other factors that might determine the students' grades and their likelihood of repeating a year. Finally, to better assess the argument we would need to know whether the reported disparity in academic performance between Sanlee and Marlee students involved only math and science students or all students.

Argument 195 Liber Publishing Company's waning profits

An editor at Liber Publishing contends here that Liber will become profitable again if and only if it returns to its original mission of publishing works primarily by small-town authors. To support this contention the editor cites the fact that since moving away from that mission Liber has become unprofitable. The editor's argument suffers from a series of logical problems, and is therefore wholly unpersuasive.

To begin with, the editor's recommendation depends on the assumption that no factors other than Liber's shift to big-city authors caused Liber's declining profits. However, common sense informs me that this assumption is a poor one. A myriad of other factors, including management and marketing problems, or shifting demand among book buyers, might just as likely be the cause of Liber's declining profits. Without ruling out these and other possible causes, the editor cannot justifiably conclude that by returning to its original mission Liber will return to profitability.

Even assuming Liber's move away from small-town authors was the cause of its declining profits, the editor's argument suffers from two classic fallacies that render the recommendation indefensible. First, the editor infers that the only way for Liber to return to profitability is to return to its original mission. Yet absent evidence to the contrary, other means of boosting its profits might also be available. Secondly, the editor infers that returning to its original mission is a sufficient condition for Liber's returning to profitability. This inference is also fallacious, at least without additional evidence to support it.

Finally, a careful reading of the argument reveals two additional problems. The editor indicates that 90% of Liber's novels are written by authors who maintain a residence in a big city. However, the editor fails to indicate whether these authors also maintain residences in small towns. If they do, then Liber has not in fact departed from its original mission, and the editor's argument is essentially moot. In addition, the editor fails to indicate what percentage of Liber's publications are novels; the lower the percentage the less likely that Liber has in fact departed from its original mission.

In conclusion, the editor's argument cannot be taken seriously as it stands. To strengthen it, the editor must show that Liber has in fact departed from its original mission, and that this departure was the actual cause of Liber's declining profits. To better evaluate the argument we would need to know what other means, if any, are available to Liber to help return the company to profitability.

Argument 200 Dentists who advertise

This argument contends that dentists' advertisements should target male patients, and should focus on assuaging distress about the pain associated with dental work. To support this assertion the argument cites statistics showing that three times more men than women faint while visiting dentists. The argument suffers from several logical problems, and is therefore unpersuasive.

To begin with, the argument depends on the assumption that men who faint while visiting the dentist do so because they are distressed about the sorts of factors that the proposed advertising aims to address. Yet the argument provides no evidence clearly establishing this causal relationship. It is equally likely that other factors are instead responsible for the fact that more men than women faint at the dentist's office. Perhaps on average men suffer from more painful dental problems than women, explaining why more men than women faint at dental offices. Without ruling out this and other alternative explanations, the speaker cannot convince me that any advertising technique will reduce either

distress or fainting among male patients.

Another problem with the argument is that the speaker provides no evidence that the proposed advertising techniques will have the intended effect. Perhaps fewer men than women notice dental advertisements. Or perhaps the proposed advertising techniques will have the opposite effect—by calling attention to the very sorts of images that cause distress and fainting. The speaker must address these possibilities and rule them out before we can accept the recommendation.

Finally, the speaker's recommendation relies on two unsubstantiated assumptions about the statistics that the speaker cites. The first is that the patients contributing to these statistics are representative of all dental patients. It is entirely possible, for instance, that a disproportionate number of male patients contributed to the statistics, rendering them biased and therefore unreliable. The second unsubstantiated assumption is that the number of patients contributing to these statistics is large enough to be statistically significant. Unless the speaker can substantiate this assumption, he cannot justifiably rely on these statistics to draw any general inferences about dental patients.

In conclusion, the argument cannot be taken seriously as it stands. To strengthen it, the speaker must show why men become distressed and faint during visits to their dentists, and that the proposed advertising techniques would in fact achieve their intended result. To better evaluate the argument we would need more information about the statistics that the argument cites—specifically, how many patients contributed to these statistics and whether these patients are representative of dental patients in general.

Argument 204 Peanuts as a replacement for sugar crops

This letter concludes that to increase farm revenue this country's farmers should replace their sugar crops with peanuts. To support this assertion, the letter's author claims that demand for sugar is sure to decline due to a growing awareness of the health hazards of eating too much sugar. The author also cites the fact that in the nearby country of Palin increased peanut production has resulted in increased revenue for farmers. However, the author's argument relies on several poor assumptions, and is therefore unpersuasive as it stands.

A threshold problem with the letter involves the new research that the author cites to support his conclusion. The author fails to indicate whether consumers are in fact aware of the new research about the harmful effects of eating too much sugar, or whether consumers eat too much sugar in the first place. If consumers are unaware of the research, or if they do not currently eat too much sugar, then this research lends no support to the author's assertion that sugar consumption is likely to decline as a result of the new research.

Secondly, the argument unjustifiably assumes that growing consumer awareness of sugar's health hazards will cause consumers to not only decrease sugar consumption but also increase peanut consumption. Common sense informs me otherwise, especially considering the addictive quality of sugar. In fact, the author provides explicitly that peanuts are low in sugar, suggesting that peanuts are a poor substitute for sugar.

Thirdly, the author's claim that farm revenues will increase should farmers replace sugar crops with peanuts relies on certain dubious economic assumptions. One such assumption is that the market price of peanuts will be sufficiently high to compensate for lost revenue from current sugar sales. Another is that the supply of peanuts will suffice to provide farmers with sufficient revenue. Absent evi-

dence comparing the market price of sugar to that of peanuts, as well as evidence about the capacity of this country's farms to grow peanut crops, it is impossible to assess the author's assertion that replacing sugar crops with peanuts will increase farm revenues.

Finally, the author's reliance on the fact that peanut-farming revenues in neighboring Palin have increased is problematic in two respects. First, the analogy depends on the assumption that dietary tastes of consumers in both countries are similar. However, it is entirely possible that consumer demand for peanuts in Palin would be higher than that in this country in any event. This would explain why, in Palin, demand has met increased production, and therefore why Pahn's peanut-farming revenues have increased. The analogy also depends on the assumption that environmental conditions in both countries equally support peanut crops. If they do not, then the author cannot justifiably rely on the profitability of Palin's peanut farms to conclude that peanut farms in the author's country would be just as profitable.

In conclusion, the argument is unconvincing as it stands. To strengthen it, the author must demonstrate that this country's consumers will in fact decrease their sugar consumption as a result of their growing awareness of its health risks. The author must also provide clear evidence that the demand for peanuts and the revenue from peanut production in this country are likely to match the current demand for sugar and farm revenue from sugar production, respectively. To better evaluate the argument we would need to compare the two countries' climatic and soil conditions; we would also need to compare consumer tastes in Palin with consumer tastes in the author's country.

Argument 205 Reducing crime in the city of Amburg

Amburg's Chamber-of-Commerce president has recommended high-intensity lighting throughout Amburg as the best means of reducing crime and revitalizing city neighborhoods. In support of this recommendation the president points out that when Belleville took similar action vandalism declined there almost immediately. The president also points out that since Amburg's police began patrolling on bicycles the incidence of vandalism has remained unchanged. The president's argument is flawed in several critical respects.

First, the argument rests on the unsupported assumption that in Belleville the immediate decline in vandalism was attributable to the lighting—rather than to some other phenomenon—and that the lighting has continued to serve as an effective deterrent there. Perhaps around the same time the city added police units or more after-school youth programs. Moreover, perhaps since the initial decline vandals have grown accustomed to the lighting and are no longer deterred by it. Without ruling out other feasible explanations for the decline and showing that the decline was a lasting one, the president cannot reasonably conclude on the basis of Belleville's experience that the same course of action would serve Amburg's objectives.

Secondly, the president assumes too hastily that Amburg's bicycle patrol has been ineffective in deterring vandalism. Perhaps other factors—such as a demographic shift or worsening economic conditions—have served to increase vandalism while the bicycle patrol has offset that increase. Thus, without showing that all other conditions affecting the incidence of vandalism have remained unchanged since the police began its bicycle patrol the president cannot convincingly conclude that high-intensity lighting would be a more effective means of preventing vandalism.

Thirdly, the president falsely assumes that high-intensity lighting and bicycle patrolling are Am-

burg's only possible means of reducing crime. In all likelihood Amburg has a myriad of other choices—such as social programs and juvenile legal-system reforms, to name just a few. Moreover, undoubtedly vandalism is not the only type of crime in Amburg. Thus, unless the president can show that high-intensity lighting will deter other types of crime as well I cannot take seriously the president's conclusion that installing high-intensity lighting would be the best way for Amburg to reduce its overall crime rate.

Finally, even if high-intensity lighting would be Amburg's best means of reducing crime in its central business district, the president's further assertion that reducing crime would result in a revitalization of city neighborhoods is unwarranted. Perhaps the decline of Amburg's city neighborhoods is attributable not to the crime rate in Amburg's central business district but rather to other factors—such as the availability of more attractive housing in the suburbs. And if the neighborhoods in decline are not located within the central business district the president's argument is even weaker.

In sum, the recommendation is not well-supported. To bolster it the president must show that Belleville's decline in vandalism is lasting and is attributable to the lighting. The president must also show that lighting would be more effective than any other means at Amburg's disposal to reduce not just vandalism but other crimes as well. To better assess the recommendation I would need to know whether Amburg's declining city neighborhoods are located within the central business district, and whether any other factors might have contributed to the decline.

Argument 206 Organized sports for Parkville's children

This letter concludes that Parkville should not allow children under age nine to participate in organized competitive sports. To support this conclusion, the author points out the increasing number of children nationwide who become injured during athletic competitions. The author also cites the fact that in some big cities children report undue pressure from coaches and parents to win, and that long practice sessions take time away from a child's academic pursuits. However, the author's argument relies on a series of unsubstantiated assumptions, and is therefore unpersuasive as it stands.

One problem with the argument is that it assumes that the nationwide statistics about the incidence of sports injuries among youngsters applies equally to Parkville's children. Yet this might not be the case, for a variety of possible reasons. Perhaps Parkville maintains more stringent safety standards than the national norm; or perhaps children's sporting events in Parkville are better supervised by adults, or supervised by more adults. Without ruling out such possibilities, the author cannot justifiably conclude that Parkville has a sports-injury problem to begin with.

A second problem with the argument is that it unjustifiably assumes that in Parkville parents and coaches unduly pressure youngsters to win organized athletic competitions. The only evidence the author provides to substantiate this assumption are the reports from "big city" children. We are not informed whether Parkville is a big city. Perhaps people who live in big cities are generally more competitive than other people. If so, and if Parkville is not a big city, then the author cannot justifiably rely on these reports to conclude that the proposed course of action is necessary.

A third problem with the argument is that it unfairly assumes that children do not benefit academically from participating in competitive sports. It is entirely possible that such sports provide children with the sort of break from academics that helps them to be more productive academically. It is also possible that the competitive drive that these sports might instill in young children carries over to their

academics and spurs them on to perform well in school. Without considering such potential academic benefits, the author cannot reasonably conclude that for young children the disadvantages of participating in athletic competition outweigh the benefits.

In conclusion, the argument is unconvincing as it stands. To better evaluate the argument we would need more information about the incidence of sports injuries among young children in Parkville. To strengthen the argument the author must demonstrate that Parkville's parents and coaches exert the kind of pressure on their children reported by "big city" children and, if so, that this pressure in fact contributes to the sort of problems with which the author is concerned.

Argument 207 The ozone layer and the **salamander** population

In this argument the speaker claims that increased ultraviolet radiation due to thinning of the earth's ozone layer is responsible for the significant decline in the number of salamanders who lay their eggs in mountain lakes, and that this thinning will cause population declines in other species. To justify these claims the speaker points out that salamander eggs lack a protective shell and thus their tissues are highly susceptible to radiation damage, then reasons that the increased radiation must damage these eggs and prevent them from hatching. The argument is problematic in several critical respects, which render it unconvincing.

To begin with, the argument assumes that the salamander population is in fact declining, yet this assumption is not born out by the mere fact that the number of salamanders laying eggs in mountain lakes is declining. It is entirely possible that in other locations the salamander population is increasing. For that matter, perhaps the number of eggs a salamander lays in a mountain lake is increasing on average. Either scenario, if true, would seriously call into question any prediction about population changes for salamanders or for other species.

Even if the total salamander population is declining, an inverse correlation between ultraviolet radiation and salamander population does not suffice in itself to prove that the former causes the latter. The speaker must account for the possibility that the number of eggs salamanders lay is declining in all areas—regardless of the amount of radiation reaching the surface. The speaker must also eliminate all other reasonable explanations for the decline. For example, if the population of species that prey on salamanders or eat their eggs is increasing, this would explain the population decline and therefore undermine the speaker's entire argument.

Even assuming that the total salamander population is declining as a result of increasing radiation, the speaker cannot reasonably infer that other species are equally vulnerable to a population decline as a result. Perhaps the absence of a shell, combined with its mountain-lake location, renders a salamander egg more vulnerable to ultraviolet radiation than any other type of egg. If so, this fact would cast considerable doubt on the speaker's prediction for other species.

Finally, the speaker's grave prediction relies on the assumption that the ozone-thinning process will not reverse in the future. Although this assumption might be born out, on the other hand it might not. Without providing some assurance that the ozone layer will at least continue to be as thin as it is now, the speaker cannot convince me that other species will experience a population decline as a result of radiation damage to eggs.

In sum, the speaker's argument depends on a series of doubtful assumptions, and is therefore weak. To strengthen it the speaker must supply better evidence that the total salamander population is

declining, and must rule out all other possible explanations for that decline. The speaker must also provide clear evidence that the current level of radiation reaching the surface is as potentially damaging to the eggs of other species, and must account for why other species have not already experienced a declining population. Finally, to better assess the argument I would need a reliable prognosis for the earth's ozone layer.

Argument 209 A new president for the **Fancy Toy Company**

In this memo, a manager at Fancy Toy Company recommends replacing Pat Salvo, the company's current president, with Rosa Winnings, who is currently president of Starlight Jewelry. To support this recommendation the manager points out that Fancy's profits have declined during the last three quarters under Pat's leadership, while Starlight's profits have been increasing dramatically. The manager's argument is unconvincing for several reasons.

First, the manager's recommendation relies partly on the assumption that Pat was the cause of Fancy Toy's declining profits. However, this need not be the case. Perhaps the toy business is seasonal, and the coming quarter is always the most profitable one. Or perhaps the cost of materials or labor have increased, and Pat has had no control over these increases. Without taking into account such possibilities, the manager simply cannot reasonably conclude that Pat is responsible for Fancy's declining profits, and that replacing Pat will therefore enhance Fancy's profits.

Similarly, the manager's recommendation assumes that it is Rosa who has been primarily responsible for Starlight's profitability. However, the manager provides no evidence to affirm this assumption. It is entirely possible that all jewelry businesses have prospered recently, regardless of the abilities of the managers. Or perhaps the costs of precious metals and other materials have declined in recent years, thereby leading to increased profits for Starlight. Moreover, perhaps Rosa has only served as president of Starlight for a short while, and it was her predecessor who is to credit for Starlight's profitability. Without taking into account these possibilities, the manager cannot defend the conclusion that it is Rosa who is responsible for Starlight's increasing profitability.

Finally, the manager's recommendation to replace Pat with Rosa rests on the poor assumption that the two businesses are sufficiently similar that Rosa's experience and skill in one business will transfer to the other. Even if Starlight's increasing profitability is attributable to Rosa's leadership, she might nevertheless be unsuccessful leading a toy company, depending on how much experience in the toy business is required to successfully lead such a company.

In conclusion, the argument is unconvincing as it stands. To strengthen it the manager must show that Pat, and not some other factor beyond Pat's control, is responsible for Fancy's declining profits. Similarly, the manager must show that it is Rosa who is primarily responsible for Starlight's profitability, and that Rosa's abilities will transfer to the toy business. In order to better evaluate the argument, we would need more information about how long Pat and Rosa have served as presidents of their respective companies, and what their long-term record is for leading their respective companies to profitability.

Argument 211 A job-opportunity program for **Waymarsh University**

In this memo, a Waymarsh University administrator recommends that in order to achieve its academic goals Waymarsh should adopt the same "job-op" program currently offered at Plateau Technical

College. To support this recommendation, the administrator points out a high enrollment rate in the program at Plateau, high academic grades among Plateau students enrolled in the program compared to other Plateau students, and a high success rate among new Plateau graduates in finding jobs. The administrator's argument is unconvincing for several reasons.

First of all, the administrator does not inform us what Waymarsh's academic goals are. It is entirely possible that these goals have nothing to do with enrollment in job opportunity programs or in the job placement rate for new graduates. Although Plateau's goals are likely to depend on its job-placement rate, perhaps Waymarsh's primary goal is to prepare its students for graduate-level study. Even if Waymarsh's goals involve job placement, there might be alternative means of accomplishing those goals. In short, without identifying Waymarsh's goals and ruling out other possible means of attaining them, the administrator cannot justifiably conclude that Waymarsh should adopt the job-op program.

Secondly, the fact that a high percentage of Plateau students enroll in Plateau's job-op program does not mean that a large portion of Waymarsh students will also enroll in the program. Plateau students might be far more concerned about obtaining employment immediately after graduation than Waymarsh students are. The fact that Plateau is a two-year technical college while Waymarsh is a university supports this assertion.

Thirdly, the fact that Plateau students enrolled in the job-op program attain higher grades than other Plateau students does not necessarily mean that the job-op program is responsible for this phenomenon. Perhaps only the brighter, more competitive Plateau students enroll in the job-op program in the first place. Without ruling out this possibility, the administrator cannot convincingly conclude that Waymarsh students who enroll in the job-op program are more likely to attain better grades or find jobs upon graduation. In fact, a job-op program might actually thwart Waymarsh's efforts, by encouraging enrollees to quit school and take jobs for which a four-year degree is not needed.

Finally, the administrator overlooks the possibility that the job-op program is oriented toward the needs of students at technical schools. A job-op program that successfully places technical students might not be as successful in placing graduates of four-year universities, because the types of jobs the two groups of graduates typically seek and would qualify for are quite different.

In conclusion, the argument is unconvincing as it stands. To strengthen it the administrator must show that one of Waymarsh's academic goals is to place its new graduates in jobs. The administrator must also show that this job-op program is equally successful in placing university graduates as it is in placing technical school graduates. To better evaluate the argument we would need more information about the extent to which the job-op program is actually responsible for the successful job placement rate among Plateau's graduates.

Argument 212 Patriot car company's marketing strategy

In this memo, the president of Patriot car manufacturing argues that in order to increase its market share Patriot should (1) discontinue its older models, which look "old-fashioned" and have not been selling well, (2) begin manufacturing sporty models, and (3) hire Youth Advertising agency, which has successfully promoted the country's leading soft drink. To justify this recommendation the president points out that many regions report a rapid increase in the number of newly licensed drivers. However, this argument relies on several dubious assumptions, and is therefore unpersuasive.

To begin with, the president's argument relies on certain unproven assumptions about the reports

of a sharp increase in the number of newly licensed drivers. First, the argument assumes that the reports are accurate, and that these regions account for a statistically significant portion of Patriot's potential buyers. Secondly, the president overlooks the possibility that in other regions that number is actually declining, so that there is no net increase at all.

Even assuming that the reports are accurate and the regions cited are representative of the overall territory in which Patriot cars are marketed, the president concludes too hastily that newly licensed drivers will tend to favor new cars over used ones, and to favor Patriot's sporty new cars over other manufacturers' new vehicles. The president ignores the likelihood that the vast majority of new drivers are teenagers who cannot afford new sports cars, or new cars of any kind. Even teenagers who can afford new sports cars might prefer other manufacturers' cars—perhaps due to Patriot's old-fashioned image. Lacking evidence that new drivers who buy cars will tend to buy Patriot sports cars, the president cannot convince me that the recommended course of action will increase Patriot's market share.

Finally, the fact that Youth has successfully promoted the country's leading soft drink amounts to scant evidence that Youth would also be successful in promoting Patriot cars.

Marketers that are effective in one industry are not necessarily effective in another. Besides, the president unfairly assumes that Patriot's current advertising agency is partly responsible for Patriot's relatively small market share. Perhaps some other factor—such as poor management, distribution, or pricing decisions—is the true reason for Patriot's market-share problem. Moreover, perhaps Youth would be less effective than Patriot's current ad agency. Thus, switching to Youth will not necessarily improve Patriot's market share—and might even result in a decline in that share.

In sum, the president's recommendation is weak. To strengthen it the president must show that the reports are a reliable indicator of the overall change in the number of newly licensed drivers. The president must also provide clear evidence—perhaps by way of a reliable survey—that a sufficient percentage and number of new drivers who are able and willing to buy new cars will choose Patriot's sports cars over other manufacturers' cars, so that Patriot's overall market share will increase. To better assess the recommendation that Patriot switch to Youth, I would need to know the extent to which Patriot's current ad strategy is responsible for Patriot's market-share problems; then I would need to know Youth's experience and success record in the car industry—relative to that of Patriot's current agency as well as other available agencies.

Argument 213 Boosting **Armchair Video**'s profits

In this memo, the owner of Armchair Video concludes that in order to boost sagging profits Armchair's stores should eliminate evening operating hours and should stock only movies that are less than 2 years old. To support this conclusion the owner points out that since Armchair's downtown Marston store implemented these changes, very few customers have complained. The owner's argument relies on several unsubstantiated assumptions, and is therefore unconvincing as it stands.

In the first place, implicit in the argument is the assumption that no other means of boosting profits is available to Armchair. While the owner has explicitly ruled out the option of raising its rental rates, the owner ignores other means, such as selling videos, or renting and selling compact discs, candy, and so forth. Without considering such alternatives, the owner cannot justifiably conclude that the proposed changes are the only ways Armchair can boost its profits.

A second problem with the argument is that it assumes that the proposed changes would in fact enhance profits. It is entirely possible that the lost revenue from reducing store hours would outweigh the savings in reduced operating costs. Perhaps Armchair customers are attracted to the stores' wide selection and variety of movies, and that Armchair would lose their patronage should it reduce its inventory. Moreover, common sense informs me that video rental stores do most of their business during evening hours, and therefore that the proposed action would actually result in a further decline in profits.

Two additional problems involve the downtown Marston store. First, the owner implicitly assumes that the store has increased its profits as a result of eliminating evening operating hours and stocking only newer movies. Yet the owner provides no evidence to support this assumption. One cannot infer from the mere fact that the store's patrons have not complained that the store's business, and in turn profits, have increased as a result of these changes.

A second problem with Marston is that the owner assumes this store is representative of Armchair outlets generally. It is entirely possible that, due to its downtown location, the Marston store attracts a daytime clientele more interested in new movies, whereas other outlets depend on an evening clientele with different or more diverse tastes in movies. Or perhaps downtown Marston lacks competing video stores or movie theaters, whereas Armchair's other stores are located in areas with many competitors. Without accounting for such possibilities, the owner cannot convince me that the profits of other Armchair outlets would increase by following Marston's example.

In conclusion, the argument is unconvincing as it stands. To strengthen it the owner must provide strong evidence that the cost savings of the proposed course of action would outweigh any loss in revenue, and that no other viable means of boosting its profits is available to Armchair. To better evaluate the argument we would need information enabling us to compare the Marston store's clientele and competition with that of other Armchair stores. We would also need more information about Marston's profitability before and after it implemented the new policies.

Argument 215 Water rationing and economic growth

In this letter, a Grandview City business leader concludes that in order to promote economic health the city must abolish the water-rationing rules it implemented during last year's drought. To support this conclusion the letter's author points out that since the city implemented these rules industrial growth in the area has declined. However, this argument contains several logical problems, which render it unconvincing as it stands.

First of all, the argument relies on two threshold assumptions: that people who use the city's water have complied with the rules, and that area industry is subject to the rules in the first place. Yet the author supplies no evidence to substantiate either assumption. In other words, if area industries have not in fact been rationing water, the author's conclusion that water rationing is a contributing cause of the recent decline in industry growth would be indefensible.

A second problem with the argument is that it overlooks other possible explanations for the decline in industry growth. Perhaps the decline is the result of a general economic recession that has also impacted businesses in areas not subject to water rationing. Or perhaps local or state regulations unrelated to water rationing are instead responsible for the slowdown. Without accounting for such possibilities, the author cannot justify the conclusion that the water rationing is the cause of the slow-

down.

A third problem with the argument is that it unjustifiably assumes that stopping water rationing would help reverse the decline in industry growth. It is entirely possible that this course of action would actually exacerbate the decline. Specifically, perhaps the lack of water has been the primary factor in the slowdown. If so, and if the rationing stops, water might become even more scarce depending on current drought conditions, in which case the slowdown would worsen.

In conclusion, the argument is unconvincing as it stands. To strengthen it the business leader must provide strong evidence that no other factors were responsible for the slowdown in industry growth, and that industry has complied with the rules in the first place. Finally, to better evaluate the argument we would need more information about current water availability in the area, so that we can assess how stopping water rationing would affect this availability.

Argument 216 The benefits of retiring to Clearview

This article argues that anyone seeking a place to retire should choose Clearview. To support this argument the article cites Clearview's consistent climate and natural beauty; its falling housing costs; its low property taxes compared to nearby towns; and the mayor's promise to improve schools, streets, and services. The article also claims that retirees can expect excellent health care because the number of physicians in Clearview greatly exceeds the national average. This argument is flawed in several critical respects.

To begin with, although consistent climate and natural beauty might be attractive to many retirees, these features are probably not important to all retirees. For many retirees it is probably more important to live near relatives, or even to enjoy changing seasons. Thus, I cannot accept the author's sweeping recommendation for all retirees on this basis.

Also, Clearview's declining housing costs do not necessarily make Clearview the best place to retire—for two reasons. First, despite the decline Clearview's housing costs might be high compared to housing costs in other cities. Secondly, for wealthier retirees housing costs are not likely to be a factor in choosing a place to retire. Thus, the mere fact that housing costs have been in decline lends scant support to the recommendation.

The article's reliance on Clearview's property-tax rates is also problematic in two respects. First, retirees obviously have innumerable choices about where to retire besides Clearview and nearby towns. Secondly, for retirees who are well-off financially property taxes are not likely to be an important concern in choosing a place to retire. Thus, it is unfair to infer from Clearview's property-tax rates that retirees would prefer Clearview.

Yet another problem with the argument involves the mayor's promises. In light of Clearview's low property-tax rates, whether the mayor can follow through on those promises is highly questionable. Absent any explanation of how the city can spend more money in the areas cited without raising property taxes, I simply cannot accept the editorial's recommendation on the basis of those promises. Besides, even if the city makes the improvements promised, those improvements—particularly the ones to schools—would not necessarily be important to retirees.

Finally, although the number of physicians in Clearview is relatively high, the per capita number might be relatively low. Moreover, it would be fairer to compare this per capita number with the per capita number for other attractive retirement towns rather than the national average. After all, retirees

are likely to place a relatively heavy burden on health-care resources. Besides, the article provides no assurances that the number of physicians in Clearview will remain high in the foreseeable future.

In conclusion, the recommendation is poorly supported. To strengthen it the author must convince me—perhaps by way of a reliable survey—that the key features that the vast majority of retirees look for in choosing a place to live are consistent climate, natural beauty, and low housing costs. The author must also provide better evidence that Clearview's property taxes are lower than the those of cities in other areas. The author must also explain how the city can make its promised improvements without raising property taxes. Finally, to better assess the argument I would need to know how the per capita number of physicians in Clearview would compare to the national average in the future.

Argument 218 Maintaining profits at Hyper-Go Toy Company

In this memo, the president of Hyper-Go Toy Company (HG) argues that in order to maintain profitability the company should discontinue its complete line of action toys and focus exclusively on a new line of educational toys. To support this argument the president cites the dramatic decline in sales of HG's Fierce Fighter (FF) toy airplane, which during the previous three years had been a top seller, and an HG customer survey indicating increasing concern among parents about youth violence and for improving their children's education. The president also points out that several other toy companies have begun marketing educational toys and report a 200% increase in overall sales, and that the average family income is growing. The president's argument relies on several doubtful assumptions and is therefore unpersuasive.

First, the president's assumption that parental concern about youth violence is the cause of declining FF sales might be unwarranted. The decline might have been caused by one or more other factors—such as supply or distribution problems, new competing products from other toy companies, or a waning of interest in FF among children. Without ruling out these and other possible reasons for the decline, the president's argument seems ill-conceived.

Secondly, the results of HG's customer survey are not necessarily representative of the overall population of toy-buying parents. Perhaps HG's current customers are more concerned about youth violence and education than most parents. If so, then the president has overlooked the possibility that a substantial portion of HG's target market would not react favorably to the proposed changes.

Thirdly, perhaps sales of HG's other action toys remained stable or even increased last year. In fact, it is entirely possible that some of HG's other toys are becoming very popular and will soon replace FF as top sellers. If so, then discontinuing the entire line would be ill-advised indeed.

Fourth, assuming the toy companies that saw a 200% sales increase last year are statistically representative of toy companies in general, that increase might be due to action-toy sales rather than to educational-toy sales. If so, then the statistic would amount to scant support for the proposed course of action.

Finally, the mere fact that average family income is growing provides little assurance that the proposed changes would increase HG's sales. Perhaps the average income of families without young children is growing, but for families with young children who buy toys it is shrinking. For that matter, perhaps average family expenses are also growing, so that families have even less discretionary income than before. Without ruling out these possibilities, the president cannot justify the proposed changes on the basis of the growth of average family income.

In sum, the president's argument is unconvincing as it stands. To strengthen it the president must show that parents in general, not just HG customers, are concerned about youth violence and education, and that these concerns are the reason for declining FF sales. To better assess the argument I would need more information about sales trends of HG's other action toys, and about the types of toys that have contributed to the 200% increase in sales for the other toy companies.

Argument 219 Megamart's leisure-activity product lines

In this memo, the vice president of Megamart concludes that Megamart should expand its line of products related to leisure activities. To support this claim the memo points out that for three years in a row the average household income nationwide has risen. However, close inspection of the argument reveals several logical problems, which render it unconvincing as it stands.

First of all, the claim relies on two threshold assumptions about rising income. One is that this trend will continue in the future; if it does not then the proposed course of action is unlikely to result in increased profits for Megamart. The other threshold assumption is that the cost of living is not also increasing at least at a commensurate rate. Yet it is entirely possible that living costs have risen to meet or even exceed the rise in income. If so, Megamart would in all likelihood sell fewer leisure products than otherwise.

Even assuming that discretionary income is rising and will continue to rise, the argument relies on the additional assumption that people will spend this discretionary income on leisure products. However, the memo provides no evidence to substantiate this assumption. Perhaps people are increasing their savings rather than spending their additional income. If so, this fact would significantly undermine the vice president's claim that demand for leisure products is increasing, and therefore that Megamart would benefit by offering more such products.

Yet another problem with the argument involves the reason why average income has risen in the first place. It is entirely possible that income has risen because people have been working more hours. If so, then in all likelihood people have less leisure time, in which case they will not spend more money on leisure products—simply because they have less time for leisure pursuits. Without addressing this issue, the vice president cannot convince me that Megamart should expand its line of leisure products.

In conclusion, the vice president's argument is unconvincing as it stands. To strengthen it the vice president must provide strong evidence that discretionary income is rising and will continue to rise. The vice president must also show that people will in fact choose to spend this income on leisure products, and that people have enough free time for leisure pursuits in the first place.

Argument 223 How to increase profitability at ABC Cereal Company

This ABC Cereal Company memo concludes that to increase its profitability ABC must lower both the sugar content and price of its Better Bran (BB) cereal. To justify this conclusion the memo cites the fact that sales of BB have declined in recent years. The memo attributes this decline to a concern among most consumers about the amount of sugar in their cereals, and to the 5% increase in the price of BB during each of the last three years. The memo is unconvincing for several reasons.

First, the mere fact that most consumers are concerned about sugar in cereal amounts to scant evidence that the decline in BB sales is due to that concern. The level of concern, or the amount of

sugar in BB, might not be sufficiently high to cause consumers to stop buying BB cereal on either basis. Moreover, unless the level of concern has grown during recent years I cannot take seriously the claim that declining BB sales in recent years is due to that concern—rather than to some other event or trend.

Secondly, assuming that the 5% price increases have contributed to the decline in BB sales, it would be premature to conclude that profits from BB sales have also declined as a result. Perhaps the additional revenue from the price increases more than offset the decline in revenue due to the diminishing number of units sold. Thus, ABC cannot convince me on the basis of the price increases and the sales decline that lowering BB's price would serve to improve ABC's overall profitability.

Thirdly, the memo's recommendation rests on the dubious assumption that the proposed actions are the only two means of increasing ABC's overall profitability. In all likelihood, ABC's profits are a function not only of how many boxes of BB it sells but also of its costs and its revenue from other products. Perhaps ABC can improve its profits by other means—such as expanding its cereal line, marketing BB to health-conscious consumers and raising the price of BB, or cutting costs in other areas. For that matter, if other cereal companies raise their prices, consumers might begin to consider BB a bargain at its current price—or perhaps even at a somewhat higher price. In short, since the memo has not ruled out all other possible scenarios that might serve to improve ABC's overall profitability I simply cannot take the memo's recommendation seriously.

Finally, even in the unlikely event that one of the two proposed changes is necessary to increase ABC's overall profitability, the memo's assertion that both changes are necessary might nevertheless be unwarranted. Perhaps only one of the two changes will suffice. Since the memo ignores this possibility the strength of its recommendation remains questionable at best.

In sum, ABC might be ill-advised to follow the memo's advice. To strengthen the argument that ABC must lower BB's price and sugar content to improve profitability ABC's planners must provide clear evidence that consumer concern about sugar in cereals is the primary reason for declining BB sales, and that this decline has diminished BB's profitability. To better assess ABC's claim that the proposed course of action is necessary to improve ABC's profitability, I would need to know what other alternatives, if any, are available to ABC for cutting costs and for increasing revenue.

Argument 225 Meeting consumer demand for automobiles

In this memo, the manager of a car manufacturing company argues that the company must add a second plant in order to continue to thrive. To support this argument the manager points out that its existing plant can only produce 40 million cars, but that according to company projections 80 million people will want to buy the company's cars. The manager claims that the company can achieve its objective by operating the new plant on a part-time basis using workers from the existing plant on a rotational basis. To support this claim the manager points out that a certain airplane manufacturing company employed this strategy successfully five years ago. The manager's argument is problematic in several critical respects.

First of all, the manager assumes that no course of action other than the proposed one will ensure that the company continues to thrive; yet the manager fails to substantiate this assumption. Since demand is expected to be very high, perhaps the company can continue to thrive simply by raising the price of its cars. For that matter, perhaps the company can continue to thrive if it makes no changes

at all. Without accounting for either possibility the manager cannot convince me that building a second plant is necessary.

Secondly, even if building a second plant is necessary for the company to continue to thrive, in itself this course of action might not suffice. After all, how can the manager reasonably expect that a second plant will produce as many cars as the existing one if it operates on only a part-time basis? And if the new plant borrows labor from the existing plant then production at the existing plant might decline. Thus, unless the manager can convince me that the new plant will be far more efficient than the current plant I do not see any way that operating a new plant on a part-time basis can double the company's production.

Finally, the mere fact that one certain airplane manufacturer adopted a similar plan with some success is scant evidence that this car company will succeed if it follows the manager's plan. The memo provides no information about how many airplanes the airplane manufacturer produced. Nor does the memo identify what constituted "success" for the airplane manufacturer. Perhaps that company considered itself successful by producing only an additional 10% more airplanes, or by merely managing to avoid bankruptcy. In short, as it stands the anecdotal evidence about the airplane company is far too vague to lend meaningful support to the manager's argument.

In sum, the manager's plan seems ill-conceived. To strengthen the argument that the company must add a second plant to continue to thrive, the manager must at the very least convince me that the company has no alternative means of achieving this objective. The manager should also provide evidence that operating a new plant on only a part-time basis would suffice to double production—perhaps by showing that the new plant would employ newer, more efficient equipment than the existing plant. To better assess the argument it would be useful to know what constituted "success" for the airplane manufacturer and, more specifically, the percentage by which that company increased production as a result of adding a second plant.

Argument 226 Improving Central Plaza's attractiveness

This editorial concludes that the city should ban skateboarding from its downtown Central Plaza in order to attract visitors to that area, to return the area to its "former glory", and to make it "a place where people can congregate for fun and relaxation". To justify this conclusion the editorial points out that skateboarders are nearly the only people one sees anymore at Central Plaza, and that the Plaza is littered and its property defaced. The editorial also points out that the majority of downtown merchants support the skateboarding ban. This argument is flawed in several critical respects.

First, the editorial's author falsely assumes that a ban on skateboarding is both necessary and sufficient to achieve the three stated objectives. Perhaps the city can achieve those objectives by other means as well—for example, by creating a new mall that incorporates an attractive new skateboard park. Even if banning skateboarders altogether is necessary to meet the city's goals, the author has not shown that this action by itself would suffice. Assuming that the Plaza's reputation is now tarnished, restoring that reputation and, in turn, enticing people back to the Plaza might require additional measures—such as removing litter and graffiti, promoting the Plaza to the public, or enticing popular restaurant or retail chains to the Plaza.

Secondly, the editorial assumes too hastily that the Plaza's decline is attributable to the skateboarders—rather than to some other phenomenon. Perhaps the Plaza's primary appeal in its glory

days had to do with particular shops or eateries, which were eventually replaced by less appealing ones. Or perhaps the crime rate in surrounding areas has risen dramatically, for reasons unrelated to the skateboarders' presence at the Plaza. Without ruling out these and other alternative explanations for the Plaza's decline, the editorial's author cannot convince me that a skateboard ban would reverse that decline.

Thirdly, the editorial's author might be confusing cause with effect—by assuming that the skateboarders caused the abandonment of the Plaza, rather than vice versa. It is entirely possible that skateboarders did not frequent the Plaza until it was largely abandoned—and because it had been abandoned. In fact this scenario makes good sense, since skateboarding is most enjoyable where there are few pedestrians or motorists to get in the way.

Fourth, it is unreasonable to infer from the mere fact that most merchants favor the ban that the ban would be effective in achieving the city's objectives. Admittedly, perhaps these merchants would be more likely to help clean up the Plaza area and promote their businesses were the city to act in accordance with their preference. Yet lacking any supporting evidence the author cannot convince me of this. Thus, the survey amounts to scant evidence at best that the proposed ban would carry the intended result.

Finally, the author recommends a course of action that might actually defeat the city's objective of providing a fun and relaxing place for people to congregate. In my experience skateboarding contributes to an atmosphere of fun and relaxation, for adults and children alike, more so than many other types of ambience. Without considering that continuing to allow skateboarding—or even encouraging this activity—might achieve the city's goal more effectively than banning the activity, the author cannot convincingly conclude that the ban would be in the city's best interests.

In sum, the argument is a specious one. To strengthen it, the editorial's author must provide clear evidence that skateboarding, and not some other factor, is responsible for the conditions marking the Plaza's decline. The author must also convince me that no alternative means of restoring the Plaza are available to the city, and that the proposed ban by itself would suffice to attract tourists and restore the Plaza to its former glory. Finally, to better assess the argument it would be useful to know the circumstances under which the downtown merchants would be willing to help the city achieve its objectives.

Argument 227 The benefits of a new expressway

In this newsletter the author concludes that, in order to promote the economic health of the city's downtown area, voters should approve the construction of an expressway linking downtown to outlying suburbs. To support this conclusion the author claims that the expressway would alleviate shortages of stock and materials among downtown businesses and manufacturers, and would attract workers from elsewhere in the state. However, the argument relies on a series of unsubstantiated assumptions, which render it unconvincing.

The first problem with the argument involves the author's claim that the expressway would help prevent downtown merchants and manufacturers from experiencing shortages in stock and materials. This claim depends on three assumptions. One assumption is that such a problem exists in the first place. A second assumption is that the absence of an expressway is the cause of such shortages; yet common sense tells me that the availability of these commodities is probably the primary such factor.

A third assumption is that stock and materials would be delivered primarily via the expressway. Yet it is entirely possible that these commodities are delivered directly to the downtown area by other means, such as rail or air transport. Without substantiating these assumptions the author cannot justifiably conclude that the expressway would help prevent shortages of stock and materials.

Another problem with the argument involves the author's dual claim that because of the new expressway workers from elsewhere in the state will be lured to work in this city's downtown area and at the same time will choose to live in the suburbs. The author provides no evidence that the existence of an expressway would suffice to entice people to work in this city's downtown area. Moreover, the author ignores the possibility that people who might want to work in the city's downtown area would generally prefer to live in that area as well. In this case, the expressway would be of no help in attracting qualified workers to this city's downtown area.

A third problem with the argument is that it unfairly assumes that the expressway will result in a net influx, rather than outflow, of workers to the downtown area. In fact, the expressway might make it easier for people who currently live and work downtown to commute to jobs in other areas or even relocate their businesses to outlying areas. Either scenario would serve to undermine the author's claim that the expressway would provide a boon to the downtown economy.

Finally, the argument rests on the assumption that funds used to build the expressway and to create jobs for construction workers cannot be applied to some other program instead—one that would be even more effective in promoting the health of the downtown economy. Without identifying and weighing such alternatives, the author cannot defend the conclusion that voters should approve the expressway project.

In conclusion, the argument is unconvincing as it stands. To strengthen it the author must provide strong evidence that the expressway would help alleviate shortages of supply and materials among downtown businesses and manufacturers. The author must also show that the expressway would in fact result in a net influx of workers who would change jobs because of the availability of the expressway. Finally, to better evaluate the argument we would need more information about possible alternatives to the proposal, and whether any such alternative would be more effective in promoting the health of the downtown economy.

Argument 229 Transopolis' urban renewal plan

The planning department for the city of Transopolis recommends, as part of its urban renewal plan, that the city convert a certain residential area for industrial use and relocate residents from that area to nearby unoccupied housing. To support this recommendation, the planners point out that ten years ago the city converted an area of substandard housing on the other side of town, near a freeway, for industrial use, and that afterward that area's crime rate declined while the city's overall property-tax revenue increased. I find the recommendation specious on several grounds.

To begin with, the recommendation relies on two poor assumptions about the effects of the freeway-area conversion. One such assumption is that the freeway-area conversion caused the decline in that area's crime rate. The mere fact that the conversion occurred before the decline does not suffice to prove that the conversion caused the decline. Perhaps the true cause was some unrelated development—such as a new city-wide “tough-on-crime” policy or improvements in police training. Another such assumption is that the increase in overall property-tax revenue indicates an increase in tax rev-

enue from properties in the freeway area. Perhaps property-tax revenue from the converted properties remained the same, or even declined, after the conversion, and that the city's overall property-tax revenue increase was attributable to properties located elsewhere in the city. For that matter, perhaps the city raised its property-tax rates shortly after the conversion. In short, without ruling out alternative explanations for the developments that came after the freeway-area conversion, the planners cannot convince me that the conversion was responsible for those developments.

Even if the evidence turns out to substantiate the two foregoing assumptions, the recommendation further assumes that the proposed conversion would carry the same results as the freeway-area conversion. Yet key differences between the two areas might undermine the analogy. For example, perhaps the properties surrounding the ones converted in the freeway area were not residential. Common sense informs me that crimes such as burglary and robbery are less likely in areas where few people reside. Since at least some nearby housing is available for residents displaced by the proposed conversion, this conversion might not result in any significant decline in the area's crime rate. At the same time, unless unoccupied nearby housing can accommodate all displaced residents, the conversion might create a homelessness problem, thereby undermining the city's objectives.

Finally, the recommendation assumes that all conditions bearing on whether residential-to-industrial conversions would help renew Transopolis have remained unchanged over the past ten years—and will continue unchanged in the foreseeable future. Yet, perhaps Transopolis had more and better housing for displaced residents ten years ago than today. Or perhaps Transopolis would have more trouble finding occupants for additional industrial buildings today than it did ten years ago. Indeed, a myriad of factors—including the regional and national economy, demographic shifts, and political influences—might explain why an urban-renewal program that had a salutary impact on Transopolis' crime rate and property-tax revenues in the past might nevertheless not revitalize the city today, or in the future.

In sum, the planners' recommendation is largely unfounded. To bolster it they must provide clear evidence that the freeway-area conversion contributed to the decline in that area's crime rate and to the city's overall property-tax revenue increase. To better assess the argument I would need to know what other changes have occurred in the city that might explain those developments. Finally, to better assess the proposed plan's chances of success I would need to compare the circumstances surrounding the decline in the area slated for conversion with the decline in the freeway area prior to its conversion.

Argument 230 Should the **school board's** members be reelected?

This editorial argues that the town's school board members are unconcerned about promoting high-quality arts education in local schools, and therefore should not be reelected. To support this argument the editorial's author points out that student participation in high-school drama programs has been declining steadily, and that the board recently refused to renew the high-school drama director's contract, despite the fact that he has written several award-winning plays. The author also cites the fact that \$ 300,000 of the high school budget is allotted to athletic programs, and that the head football coach is the highest paid teacher. This argument is unpersuasive for a variety of reasons.

First and foremost, the editorial indicates neither how long the current board members have occupied their board positions nor the scope of their authority. Perhaps they are new members and the

facts that the editorial cites are attributable to events and decisions occurring before the current board members assumed their positions. If so, and if the current board either has not had adequate opportunity or does not have adequate authority to reverse these developments, then any claim regarding their level of concern about arts education is unjustifiable—at least based on the evidence cited.

Even assuming adequate authority and tenure on the part of the current board members, they are not necessarily responsible for the declining student participation in drama programs. The decline might be due to some other factor. For instance, perhaps students generally dislike the current drama director. If so, then the board's refusal to renew his contract would indicate that the board is attempting to reverse the decline, and that the board is in fact concerned about facilitating arts education.

As for the fact that \$ 300,000 is devoted to athletic programs, the editorial does not indicate the school's total budget. It is entirely possible that \$ 300,000 accounts for a small portion of that budget compared to the amount budgeted for the arts. If so, and if the current school board is at least partly responsible for the current budget, these facts would cast considerable doubt on the editorial's claim that the board is unconcerned about promoting arts education.

Admittedly, the fact that the head football coach is the highest paid teacher provides some support for the editorial's claim—assuming that the current board members are at least partially responsible for that salary. However, this fact in itself is insufficient to show that the board members are unconcerned about promoting arts education. Perhaps the football coach carries additional duties that warrant the high salary; in fact, perhaps he also teaches drama or music. Or perhaps his salary is high simply because he has been a teaching-staff member longer than nearly any other local school teacher.

Finally, the editorial's claim overlooks the fact that local arts education embraces not just high-school drama but also drama programs at lower levels, and music, dance, and visual-and graphic-arts programs. Thus, even if the board's decisions indicate that they place a low priority on high-school drama education, it is entirely possible that the board is real-locating resources from that program to other arts programs. If so, then the editorial's claim is wrong, and the proper conclusion is that the board is actively concerned about promoting arts education as a whole in local schools.

In sum, the argument is unconvincing as it stands. To strengthen it the editorial's author must at the very least assure me that the current board members have been on the board long enough to have adequate opportunity to demonstrate their level of concern for arts education, and that they have the authority to do so. The author should also provide clear evidence that the decisions of these board members were responsible for the declining student participation in drama programs. To better assess the argument I would need to know the reason why the board has not renewed the current drama director's contract. I would also need to know what percentage of the high school's current budget is allocated not just to drama programs but to arts education generally, so that I could compare that percentage with the percentages allocated to other programs.

Argument 231 Advertising Eco-Power tools and appliances

In this memo, Eco-Power's sales manager recommends that the company switch from print ads to ads with catchy songs in order to reverse its declining profits. To support this recommendation the memo cites the fact that most high-school students easily recognize tunes used to advertise leading

soft-drinks and fast-food restaurants. However, the argument is unconvincing in light of several problems.

A threshold problem with the argument is that the author assumes that the current ad strategy is the cause of Eco-Power's declining profits. The author provides no evidence that this is the case. It is entirely possible that other factors are responsible for the decline. Perhaps the demand for all tools and home appliances generally has slowed; or perhaps Eco-Power's management or pricing policies are to blame. Without ruling out such possibilities, the author cannot persuade me that switching ad strategies would reverse Eco-Power's declining profits.

Another problem with the argument involves the memo's reliance on the high rate of tune-recognition among teenagers. For two reasons, this evidence lends little credible support for the recommended strategy. First, even if Eco-Power were to achieve a high rate of tune-recognition among teenagers, this demographic group is not the same group that purchases tools and home appliances. Secondly, even assuming Eco-Power can achieve a high tune-recognition rate among its target demographic group, this fact alone is no guarantee that these consumers would be more likely to buy Eco-Power products as a result of recognizing the company's tunes.

A third problem with the argument is that it assumes that the increased sales due to a high tune-recognition rate would outweigh the costs of achieving this rate. However, a tune can be communicated only via such media as radio and television; and real-world experience informs us that these advertising media are more costly than print media. Although leading soft-drink and fast-food companies can well afford the costs of producing effective tunes and of ensuring that these tunes are heard again and again by many, many consumers, Eco-Power might lack the resources to ensure the sort of tune recognition which these other companies have achieved. Unless the sales manager can convince us that the proposed ad strategy will be cost effective, his conclusion that this strategy will result in increased profits for Eco-Power is untenable.

In conclusion, the sales manager has not provided a convincing argument for the proposed ad strategy. To strengthen the argument the manager must show that the current ad strategy is in fact the cause of Eco-Power's declining profits. The manager must also provide strong evidence that the people who buy the kinds of tools Eco-Power sells would hear the company's tunes frequently enough to immediately associate the tune with the company, and that this association would cause these listeners to buy Eco-Power products. Finally, to better evaluate the argument we would need a detailed cost-benefit analysis of the proposed ad strategy.

Argument 232 Choosing a paving contractor

The vice president of a company that builds shopping malls argues here that the company should hire Appian rather than McAdam to build access roads for the company. To support this argument the vice president points out that a certain area of Route 101 that McAdam repaved two years ago has deteriorated significantly, while a certain stretch of Route 66 that Appian repaved four years ago remains in good condition. The vice president also points out that Appian recently acquired new state-of-the-art paving equipment and hired a new quality-control manager. I find the vice president's argument logically unconvincing—in several respects.

First of all, it is unfair to infer based solely on the comparison between the two stretches of highway that Appian does better work than McAdam. The inference relies on the poor assumption that the

comparative quality of two contractors' work, rather than some other phenomenon, was responsible for the comparative condition of the two stretches of pavement. Perhaps the stretch that McAdam repaved is located in an area whose extremes in climate or high traffic volume serve to erode and damage pavement very quickly. For that matter, perhaps soil or other geological conditions in that area were primarily responsible for deterioration of the pavement along that stretch. In short, without showing that all other conditions in the two areas have been essentially the same, the vice president cannot convince me that the quality of McAdam's and Appian's repaving work was responsible for the difference in how well the two stretches of pavement have held up.

Secondly, it is unfair to conclude based on Appian's recent equipment acquisition and personnel decision that Appian will do a better job than McAdam. Perhaps McAdam has also acquired the same type of equipment. Moreover, perhaps McAdam's quality-control manager is far more experienced than Appian's new manager, and as a result McAdam's product is likely to be better than Appian's. Besides, equipment and on-site management are only two of many factors affecting the quality of a pavement job. Other such factors include the experience and competence of other workers, and the paving material used. Without showing that the two firms are similar in these and other respects, the vice president cannot justify his recommendation of Appian over McAdam.

Finally, the vice president's recommendation rests on the unlikely assumption that the company has only two alternatives—McAdam and Appian. In all likelihood the company can engage one of many other paving contractors instead. Thus, to the extent the vice president recommends Appian over not just McAdam but over any other contractor the recommendation is unwarranted.

In sum, the vice president has not convinced me that the company should hire Appian. To strengthen the argument the vice president must provide clear evidence that it was the quality of McAdam's and Appian's work—rather than one or more other factors—that resulted in the difference between how well the two stretches of pavement have held up over time. The vice president must also provide better evidence that Appian's new equipment and new manager will enhance, or at least maintain, the quality of Appian's overall work—at a higher level than McAdam's overall work. Finally, to better assess the argument I would need to know what other paving contractors the company could hire, and the quality of those contractors' work compared to McAdam's and Appian's.

Argument 233 Does small-town life promote better health and greater longevity?

This newspaper story concludes that living in a small town promotes health and longevity. The story's author bases this conclusion on a comparison between the small town of Leeville and nearby Mason City, a much larger town. However, careful scrutiny of the author's evidence reveals that it lends no credible support to the author's conclusion.

A threshold problem with the argument is that the author draws a general conclusion about the effect of a town's size on the health and longevity of its residents based only on characteristics of two towns. The author provides no evidence that these two towns (or their residents) are representative of other towns their size. In other words, this limited sample simply does not warrant any general conclusions about the effect of a town's size on the health and longevity of its residents.

Next, the author cites the fact that the incidence of sick leave in Leeville is less than in Mason City. This evidence would lend support to the argument only if the portion of local residents employed

by local businesses were nearly the same in both towns, and only if the portion of employees who are local residents were nearly the same in both towns. Moreover, in relying on this evidence the author assumes that the portion of sick employees who actually take sick leave is nearly the same in both towns. In short, without showing that the two towns are similar in these ways, the author cannot draw any reliable comparisons about the overall health of the towns' residents—or about the impact of town size on health.

The author also cites the fact that Mason City has five times as many physicians per resident than Leeville. However, any number of factors besides the health of the towns' residents might explain this disparity. For example, perhaps Leeville residents choose to travel to Mason City for physician visits. Without ruling out such explanations, these physician-resident ratios prove nothing about the comparative health of Leeville and Mason City residents—or about the impact of town size on health.

Finally, the author cites the fact that the average age of Leeville residents is higher than that of Mason City residents. However, any number of factors might explain this disparity. For example, perhaps Leeville is a retirement community, while Mason City attracts younger working people. For that matter, perhaps Leeville is comprised mainly of former Mason City residents whose longevity is attributable chiefly to their former lifestyle in Mason City. In any event, the author cannot justify the conclusion that this disparity in average age is due to the difference in size between the two towns.

In conclusion, the argument that small-town living promotes good health and longevity is unpersuasive as it stands. To strengthen the argument the author must provide clear evidence that the overall population of Leeville, not just employees in Leeville, is healthier than that of Mason City. The author must also provide strong evidence that Leeville and Mason City residents visit local physicians whenever they become sick. Finally, to better evaluate the argument we would need more information about why the average age of Leeville residents exceeds that of Mason City residents.

Argument 234 A change in programming format for KNOW radio station

This memo recommends that KNOW radio station shift from rock-and-roll (R&R) music programming to all-news programming. To support this recommendation the manager points out that the number of KNOW listeners is decreasing while the number of older people in KNOW's listening area is increasing. The manager also points out that area sales of music recordings are in decline, and that a recent survey suggests that local residents are becoming better informed about politics. Finally, the manager cites the success of all-news stations in nearby cities. Careful scrutiny of the manager's argument reveals several unproven assumptions, which render it unconvincing.

First, the manager unfairly assumes that the decline in the number of KNOW listeners is attributable to the station's current format. Perhaps the decline is due instead to KNOW's specific mix of R&R music, or to transmission problems at the station. Without ruling out these and other feasible reasons for the decline, the manager cannot convince me that changing the format would reverse the trend.

Secondly, the manager's assumption that older people favor all-news programming is unsupported. Perhaps KNOW listeners are dedicated R&R fans who will continue to prefer this type of programming as they grow older. Or perhaps as KNOW's regular audience ages it will prefer a mix of R&R and news programming—rather than one format to the total exclusion of the other. Besides, the number of young people in the listening area might be increasing as well. In short, the mere fact that the num-

ber of older people in KNOW's listening area is increasing suggests nothing about KNOW's best programming strategy.

Thirdly, a decrease in local music recording sales is scant evidence that KNOW should eschew music in favor of an all-news format. Although overall music sales are in decline, perhaps sales of R&R recordings are actually increasing while sales of all other types of music recordings are decreasing. For that matter, perhaps people who buy music recordings are generally not the same people who listen to music on the radio. Either scenario, if true, would seriously undermine the manager's contention that KNOW should discontinue R&R programming.

Fourth, it is unfair to conclude from one survey suggesting that local residents are becoming better informed about politics that they are becoming less interested in listening to R&R music, or that they are becoming more interested in listening to news. After all, news embraces many topics in addition to politics. Besides, there is no reason why people interested in politics cannot also be interested in listening to R&R music. Moreover, a single survey taken just prior to an election is poor evidence that local residents' piqued interest in politics is sustainable.

Finally, it is unwarranted to infer from the success of all-news stations in nearby cities that KNOW will also succeed by following the same format. Those stations might owe their success to their powerful transmitters, popular newscasters, or other factors. Besides, the very success of these stations suggests that the area's radio listeners might favor those well-established news providers over the fledgling all-news KNOW.

In sum, the manager's evidence accomplishes little toward supporting the manager's argument for the proposed format shift. To further bolster the argument the manager must provide better evidence, perhaps by way of a reliable survey, that people within KNOW's listening area are becoming more interested in news and less interested in R&R music—or any other kind of music. The manager must also show that an all-news format would be more popular than a mixed format of music and news, and that a significant number of people would prefer KNOW's all-news programming over that of other stations in the listening area.

Argument 235 Solano's music education programs

This letter concludes that Solano school district should discontinue its music programs altogether. To justify this conclusion the author points out that only 20% of Solano's students enroll in music classes and that few Solano students pursue music as a major course of study in college. The author also points out that in nearby Rutherford student grades increased the year after that district discontinued music education. This argument is problematic in several critical respects.

A threshold problem with the argument is that it relies on certain implicit assumptions about the value of music education. Specifically, the author assumes that any education program is valuable only to the extent that it enhances overall grades and only if students choose to pursue that course of study in college. Such normative assumptions are dubious at best; common sense tells me that the chief value of music education, like that of art or physical education, lies in its contribution to the full development of a child, not in its influence on grades or choice of career. Without addressing this issue, the author's conclusion can be dismissed out of hand.

Another problem with the argument involves the implicit claim that only 20% of Solano students enroll in music courses because they are uninterested in music. This claim assumes that students have

a choice in what courses they take in the first place; yet we are not informed that this is the case. It also unfairly assumes that no other factor influences students' decisions about whether to enroll in music courses. Perhaps Solano's current music teachers are unpopular; or perhaps the district lacks sufficient funds to meet current demand for music courses or to provide adequate facilities and instruments for more students. Since the author has not ruled out these other possible explanations for the low enrollment rate, the author's implicit claim that Solano students are not interested in music is doubtful at best.

Yet another problem with the argument involves the implicit claim that music education is not worthwhile because few Solano students pursue music as a college major. This claim assumes that all Solano students pursuing a career in music attend college in the first place; yet this is not necessarily the case. The claim also assumes that Solano students are properly advised about choosing their college major; yet it is entirely possible that Solano's high school advisers dissuade students from pursuing music. Since the author fails to rule out these possibilities, the fact that few Solano students pursue music in college lends little credible support for the author's conclusion.

A final problem with the argument involves Rutherford's increase in its students' grades the year after that district discontinued music programs. This increase might be attributable to numerous factors. Perhaps that year Rutherford received substantial funding to enhance its after-school tutoring program; or perhaps it hired more effective teachers that year. Or perhaps the outgoing graduating class one year was less bright overall than the incoming freshman class the next year. Any of these scenarios, if true, would discredit the author's assertion that music education contributes to lower academic grades. Besides, the author cites an increase during only one year—an insufficiently small range to draw any reliable general conclusion.

In sum, the author's argument for discontinuing music education is weak. To strengthen the argument the author must show that the cited statistics about Solano students reflect their lack of interest in music rather than some other phenomenon, and that the increase in Rutherford's grades was the result of its discontinuing music education.

Argument 237 Mira Vista College's job-placement record

This letter recommends that in order to improve its job-placement record Mira Vista College should offer more business and computer courses and should hire more job counselors. To support this recommendation the author points out that at Green Mountain College 90 percent of last year's graduates had job offers, but that only 70 percent of Mira Vista seniors who reported that they planned to seek employment had jobs within three months after graduation, and only half of these graduates were employed in their major fields of study. This argument is problematic in several critical respects.

First, the author assumes that Green Mountain's comparatively strong job-placement record is due to the fact that it provides more business courses and job counselors than Mira Vista, rather than some other factor. But this need not be the case. Perhaps Green Mountain students are exceptionally bright or resourceful to begin with. Or perhaps the quality of instruction and job counseling at Green Mountain is exceptionally high. Moreover, perhaps Green Mountain provides more business courses and job counselors than Mira Vista simply because Green Mountain is a larger school with more students; if so, then the comparative numbers are not likely to have any bearing on job-placement success. In short, without ruling out other possible explanations for the difference between job-placement

rates, the author cannot reasonably conclude that additional business courses and job counselors would enhance Mira Vista's job-placement record.

Another problem with the argument is that the statistics comparing job-placement rates might be distorted in one or more respects. First, the author fails to indicate the percentage of Green Mountain graduates who find employment in their major fields of study. Without this information it is impossible to assess the comparative success of the two colleges in helping their recent graduates find such employment. Second, the author ignores the possibility that the time parameters defining the two schools' job-placement rates differ. Mira Vista's record was determined only three months after graduation. It is entirely possible that Green Mountain's record was based on a longer period of time, thereby distorting the comparative success of the schools in helping their recent graduates find jobs.

The cited statistics about Mira Vista's job-placement record might be unreliable in other respects as well. These statistics were based only on data from Mira Vista seniors who reported to the college's job-placement center. The author overlooks the possibility that only a small portion of Mira Vista seniors reported to begin with. The author also ignores the possibility that many of these reporting students later changed their minds about seeking employment or were offered jobs but turned them down. Without ruling out these possible scenarios, the author cannot reasonably rely on these statistics to support the claim that Mira Vista's job-placement record is comparatively poor and thus could be improved by Mira Vista's emulating Green Mountain.

In conclusion, the argument is unconvincing as it stands. To strengthen it the author must show that additional business courses and job counselors would in fact improve Mira Vista's job-placement rate, and that the comparison between the job-placement rates at the two schools is fair. Finally, the author provides no evidence whatsoever to support his recommendation for providing more computer courses; to justify this claim the author must provide supporting evidence.

Argument 238 Should the city of **Dalton** adopt a curfew for minors?

The author of this editorial argues that in order to reduce its rising crime rate the city of Dalton should establish a 10:00 p.m. curfew for minors under age 18. The author also claims that the curfew would control juvenile delinquency as well as prevent minors from becoming crime victims. To support these claims the author points out that Williamsville established a similar curfew four months ago, and that since then Williamsville's youth crime rate has dropped by 27% during curfew hours. The author also points out that in Williamsville's town square no crimes have been reported in the last four months, yet Williamsville residents had previously expressed particular outrage about the square's high crime rate. I find the editorial logically unconvincing in several respects.

To begin with, the author has failed to convince me that Williamsville's overall crime rate has declined, or that the curfew was responsible for any such decline. It is entirely possible that although that city's youth crime rate has declined, its adult crime rate has risen. If so, this fact would seriously call into question the author's claim that a similar curfew would reduce Dalton's overall crime rate. Even if Williamsville's overall crime rate has declined in the last four months, the decline is not necessarily attributable to the curfew. Perhaps Williamsville has also enhanced its police enforcement, or established social programs that help minors avoid delinquency. In short, without evidence that all other conditions that might affect Williamsville's crime rate have remained unchanged during the last four months, the author's claim that the curfew is responsible for the drop in that city's crime rate is

dubious at best.

Moreover, the evidence involving the town square does not adequately show that Williamsville's curfew has been effective in reducing its crime rate. The number of crimes reported in the square does not necessarily reflect the number actually committed there. Also, it is entirely possible that Williamsville's residents had already abandoned the town square at night by the time Williamsville established the curfew. If so, then the mere fact that no crimes in the square have been committed or reported recently proves nothing about the effectiveness of the curfew.

Even if Williamsville's curfew was responsible for a decline in that city's overall crime rate, the editorial's claim that a similar curfew would be effective in Dalton is unwarranted. Dalton might differ from Williamsville in ways that would undermine the curfew's effectiveness in Dalton. Or perhaps the percentage of crimes that are committed by adults is far greater in Dalton than in Williamsville. In either case, a curfew that is effective in reducing Williamsville's overall crime rate might be far less effective in reducing Dalton's.

Even assuming the proposed curfew would reduce Dalton's overall crime rate, the author unfairly infers that the curfew would also curb juvenile delinquency. The author's definition of juvenile delinquency might embrace additional behaviors—ones that don't amount to crimes. Besides, a reduction in the overall crime rate does not necessarily indicate a reduction in the youth crime rate.

The author's further inference that the curfew would protect minors from becoming crime victims is also unwarranted. This inference depends on the assumption that all crimes against youths occur during curfew hours. Yet common sense informs me that many such crimes occur during other hours. The inference also rests on the assumption that it is adults who are committing all crimes against youths. Yet the author fails to account for the possibility that some crimes against youths are committed by other youths.

In sum, the editorial relies on a series of dubious assumptions, which render it wholly unpersuasive. To bolster the editorial's claims the author must provide clear evidence that the curfew, and not some other phenomenon, was in fact responsible for a decline in Williamsville's youth crime rate. The author must also show that the curfew would have a similar effect in Dalton, and that the curfew would result in a decline in not just the youth crime rate but also the overall crime rate. To better assess the author's final two claims I would need to know how the author defines "juvenile delinquency", and what percentage of crimes against Dalton's youth are committed by other youths.

Argument 239 A new dormitory for Buckingham College

In this memo, a dean at Buckingham College recommends that in order to meet expected enrollment increases the college should build an additional dormitory. To support this recommendation the dean points out that rental rates for off-campus apartments have been increasing, thus making it more difficult for students to afford this housing option. The dean also points out that a new dormitory would attract prospective students to the college. This argument is problematic in several respects.

A threshold problem with the argument involves the statistical reliability of the reports about off-campus rental rates. The dean indicates only that "student leaders" reported these statistics; the dean provides no information about how these students collected their data. It is entirely possible that the report was based on an insufficiently small sample, or a sample that was unrepresentative of the town's overall student rental market.

Secondly, the dean assumes that this current trend in rental rates will continue in the future; yet the dean offers no evidence to substantiate this assumption. These rates are a function of supply and demand, and it is entirely possible that construction of apartment houses will increase in the future, thereby reducing rental rates along with the need for an additional dormitory. Without considering this possible scenario, the dean cannot justifiably conclude that an additional dormitory is needed to meet future demand.

Thirdly, the dean assumes that as enrollment increases the demand for student housing will also increase. While this might be the case, the dean ignores the possibility that the increased enrollment will be the result of an increase in the number of students commuting to Buckingham from their parents' homes. This scenario, if true, would render the dean's argument for building a new dormitory untenable.

Yet another problem with the argument involves the dean's final claim that an attractive new dormitory would attract prospective students to Buckingham. Even assuming students in fact choose colleges on this basis, by relying on this evidence the dean essentially provides an argument against building the new dormitory. If an attractive new dormitory would increase demand for dormitory space, this fact would only serve to undermine the dean's conflicting claim that the new dormitory would help meet increasing demand for dormitory space.

In conclusion, the dean's recommendation is not well supported. To strengthen it the dean must provide clear evidence that average rental rates for off-campus student apartments have in fact been increasing, that this trend will continue in the future, and that this trend will in fact result in an increased demand for dormitory housing.

Argument 240 Finding new jobs for laid-off XYZ company employees

This XYZ company memo recommends that XYZ continue to use Delany instead of Walsh as its personnel service for helping laid-off XYZ employees find new jobs. To support this recommendation the memo points out that 8 years ago, when XYZ was using Walsh, only half of XYZ's laid-off workers found new jobs within a year. The memo also points out that last year XYZ employees using Delany's services found jobs much more quickly than those who did not, and that the average Delany client found a job in six months, compared to nine months for the average Walsh client. The memo also mentions that Delany has more branch offices and a larger staff than Walsh. I find the memo's argument unconvincing for several reasons.

To begin with, Walsh's prior rate of placing laid-off XYZ employees is not necessarily a reliable indicator of what that rate would be now. Perhaps the placement rate 8 years ago was due to a general economic downturn or some other factor beyond Walsh's control. For that matter, perhaps the rate was relatively high among all placement services during that time period. In short, without ruling out other possible reasons for Walsh's ostensibly low placement rate 8 years ago, and without convincing me that this rate was low to begin with, the memo's author cannot convince me on the basis of XYZ's past experience with Walsh that XYZ should favor Delany over Walsh.

The memo also makes two hasty assumptions about the benefits of Delany's services last year. One such assumption is that these services were in fact responsible for helping the laid-off XYZ employees who used those services find jobs more quickly. It is entirely possible that the comparative success of this group was due instead to their other aggressive job-seeking efforts, which might even

have included using Walsh's services—in addition to Delany's. Also, the memo unfairly equates the speed with which one finds a job with job-seeking success. Common sense informs me that the effectiveness of a job search depends not only on how quickly one finds a job, but also on compensation, benefits, location, and type of work.

Furthermore, the difference in the two firms' overall placement time last year does not necessarily indicate that Delany would be the better choice to serve XYZ's laid-off employees. These employees might have particular skills or needs that are not representative of the two firms' clients in general. Besides, a single year's placement statistics hardly suffices to draw any firm conclusions. Last year might have been exceptional—perhaps due to some unusual event that is unlikely to reoccur, such as a major employer's move to an area that Delany serves, or out of an area that Walsh serves.

Finally, the fact that Delany has more branch offices and a larger staff than Walsh proves nothing in itself about which firm would be more effective in finding jobs for laid-off XYZ employees. Perhaps these employees generally look for jobs in geographic areas or industries outside of Delany's domain. Or perhaps the number of Delany staff members per office is actually lower than at Walsh. Either scenario, if true, would cast serious doubt on the memo's conclusion that XYZ should favor Delany over Walsh.

In sum, as it stands the recommendation is not well supported. To bolster it the memo's author must provide better evidence—perhaps from XYZ's records—that Delany's services have consistently helped laid-off XYZ employees find jobs. Instead of attempting to convince me that Walsh provided a disservice to XYZ 8 years ago, the author should provide better evidence that Walsh's services would be inferior to Delany's in the foreseeable future. Accordingly, to better assess the recommendation it would be helpful to compare the number of staff members per office at the two firms, and the level of experience of those staff members. It would also be useful to know what sorts of skills laid-off XYZ employees possess, and which firm, Delany or Walsh, serves industries and areas with more openings for people with those skills.

Argument 241 Cheating at Groveton College

In this editorial, the author concludes that colleges should adopt an honor code for detecting academic cheating. To support this conclusion the author points out that the first year after switching from a monitoring system to an honor system the annual number of reported cheating incidents at Groveton College decreased from 30 to 21, and that five years later the number was only 14. The author also cites a survey in which most students indicated they would be less likely to cheat under an honor system than if they are closely monitored. This argument is unconvincing for several reasons.

First and foremost, the argument relies on the assumptions that Groveton students are just as capable of detecting cheating as faculty monitors, and that these students are just as likely to report cheating whenever they observe it. However, without evidence to substantiate these assumptions one cannot reasonably conclude that the honor code has in fact resulted in a decline in the incidence of cheating at Groveton. Besides, common sense tells me that these assumptions are dubious at best; an impartial faculty observer is more likely to detect and report cheating than a preoccupied student under peer pressure not to report cheating among classmates.

The argument also assumes that during the five-year period all other conditions possibly affecting the reported incidence of cheating at Groveton remained unchanged. Such conditions include the num-

ber of Groveton students and the overall integrity of the student body. After five years it is entirely possible that these conditions have changed, and that the reported decrease in cheating is attributable to one or more such changes. Thus, without ruling out such alternative explanations for the reported decrease, the author cannot convince me that the honor code has in fact contributed to a decline in the incidence of cheating at Groveton.

The author's recommendation that other colleges follow Groveton's example depends on the additional assumption that Groveton is typical in ways relevant to the incidence of cheating. However, this is not necessarily the case. For instance, perhaps Groveton students are more or less likely to report cheating, or to cheat under an honor system, than typical college students. Lacking evidence that Groveton students are typical in these respects, the argument is indefensible.

Finally, the survey that the author cites might be unreliable in any of three respects. First, the author fails to assure us that the survey's respondents are representative of all college students. Second, the survey results depend on the honesty and integrity of the respondents. Third, hypothetical predictions about one's future behavior are inherently less reliable than reports of proven behavior. Lacking evidence that the survey is reliable, the author cannot reasonably rely on the survey in recommending that other colleges adopt an honor code.

In conclusion, to persuade me that other colleges should adopt an honor code in order to reduce cheating, the author must supply clear evidence that cheating at Groveton in fact decreased after the honor code was instituted there, and that it is this code that was responsible for the decrease. Finally, to better assess the usefulness of the survey I would need specific information about the survey's sampling methodology.