2

Clarity

Finding a Useful Language: Some First Steps

How might we describe the difference between these two sentences?

1a. Because we knew nothing about local conditions, we could not determine how effectively the committee had allocated funds to areas that most needed assistance.

1b. Our lack of knowledge about local conditions precluded determination of committee action effectiveness in fund allocation to those areas in greatest need of assistance.

Most of us would call the style of (1a) clearer, more concise than the style of (1b). We would probably call (1b) turgid, indirect, unclear, unreadable, passive, confusing, abstract, awkward, opaque, complex, impersonal, wordy, prolix, obscure, inflated. But when we use *clear* for one and *turgid* for the other, we do not describe sentences on the page; we describe how we feel about them. Neither *awkward* nor *turgid* are on the page. Turgid and awkward refer to a bad feeling behind my eyes.

To account for style in a way that lets us go beyond saying how we feel, we need a way to explain how we get those impressions. Some would have us count syllables and words—the fewer the better, according to most such schemes. But if we counted every syllable and word we wrote, we would spend more time counting than writing. More to the point, numbers don't explain what makes a sentence awkward or turgid, much less tell anyone how to turn it into a clear and graceful one. And even if counting did tell us when a passage was hard to read, we shouldn't have to count if we knew that it was hard to read just by reading it.

The words we use to communicate our impressions cannot alone constitute a vocabulary sufficient to describe style, but they

of information so quickly and persuasively. At first glance, most academic and professional writing seems to consist not of narrative but of explanation. But even prose that may seem wholly discursive and abstract usually has behind it the two central components of a story—characters and their actions. There are no characters visible in (5a), but that doesn't mean there aren't any; compare (5b):

5a. The current estimate is of a 50% reduction in the introduction of new chemical products in the event that compliance with the Preliminary Manufacturing Notice becomes a requirement under proposed Federal legislation.

5b. If **Congress** requires that **the chemical industry** comply with the Preliminary Manufacturing Notice, we estimate that **the industry** will introduce 50% fewer new products.

It may even be a story whose main characters are concepts:

Because the intellectual foundations of evolution are the same as so many other scientific theories, the falsification of their foundations would be necessary for the replacement of evolutionary theory with creationism.

We can make theories play the roles of competing characters:

In contrast to **creationism, the theory of evolution** shares its intellectual foundations with **many other theories.** As a result, **creationism** will displace **evolutionary theory** only when **it** can first prove that the foundations of **all those other theories** are false.

We can see how pairs of sentences like these tell the "same" story in different ways if we start with a story that seems clear and then change the way it represents characters and their actions:

Though the Governor knew that the cities needed new revenues to improve schools, he vetoed the budget bill because he wanted to encourage cities to increase local taxes.

What's the story here, which is to say, who are the characters and what are they doing? The characters are the Governor, the cities, and the schools (the legislature is also in there, but hidden). The Governor is part of three actions: he *knew* something, he *vetoed* a bill, and he *will encourage* the cities; the cities are part of three actions: they *need* revenues, they [should] *improve* schools, and

they [should] *increase* taxes; and the schools are part of one action: they will be *improved*. Those six actions are all represented by the same part of speech—they are all verbs. And that part of speech—the verb—is singularly important to why we think that this sentence about the Governor and the schools is reasonably clear.

Before you read on, rewrite that story, but instead of using those six verbs to express actions, use their noun forms. Three of the noun forms are different from the verbs: *to know → knowledge, to encourage → encouragement, to improve → improvement.* The other three nouns are identical to their corresponding verbs: *to need → the need, to veto → the veto, to increase → the increase.*

Here is a version using nouns instead of verbs. Yours may differ.

Despite his **knowledge** of the **need** by cities for new revenues for the **improvement** of their schools, the Governor executed a **veto** of the budget bill to give **encouragement** to the cities for an **increase** of local taxes.

At some level of meaning, this sentence offers the same story as the original. But at another level—at the level of how readers perceive voice, style, clarity, ease of understanding—it is different; for most of us, I hope, worse.

It is in this difference between the ways we can tell the "same" story that we locate the first principles of clear writing (which is to say, you will recall, writing that makes the reader feel clear about what he is reading).

The First Two Principles of Clear Writing

Readers are likely to feel that they are reading prose that is clear and direct when

(1) the subjects of the sentences name the cast of characters, and

(2) the verbs that go with those subjects name the crucial actions those characters are part of.

Look again at (1b):

1b. Our lack of knowledge about local conditions precluded determination of committee action effectiveness in fund allocation to those areas in greatest need of assistance.

Some Stylistic Consequences

We begin with these two principles—characters as subjects and their actions as verbs—because they have so many unexpected but welcome consequences:

• You may have been told to write more specifically, more concretely.

When we turn verbs into nouns and then delete the characters, we fill a sentence with abstraction:

There has been an affirmative **decision** for program **termination**.

When we use subjects to name characters and verbs to name their actions, we write sentences that are specific and concrete.

The Director **decided** to **terminate** the program.

• You may have been told to avoid using too many prepositional phrases.

An **evaluation** of the program by us will allow greater efficiency **in** service **to** clients.

While it is not clear what counts as "too many," it is clear that when we use verbs instead of abstract nouns, we can also eliminate most of the prepositional phrases. Compare,

We will **evaluate** the program so that we can **serve** clients better.

• You may have been told to put your ideas in a logical order.

When we turn verbs into nouns and then string them through prepositional phrases, we can confuse the logical sequence of the actions. This series of actions distorts the "real" chronological sequence:

The **closure** of the branch and the **transfer** of its business and non-unionized employees **constituted** an unfair labor practice because the purpose of **obtaining** an economic benefit by means of **discouraging** unionization motivated the **closure** and **transfer.**

When we use subjects to name characters and verbs to name their actions, we are more likely to match our syntax to the logic of our story:

The partners **committed** an unfair labor practice when they **closed** the branch and **transferred** its business and nonunionized em-

ployees in order to **discourage** unionization and thereby **obtain** an economic benefit.

• You may have been told to use connectors to clarify logical relationships:

The more effective presentation of needs by other Agencies resulted in our failure in acquiring federal funds, despite intensive lobbying efforts on our part.

When you turn nouns into verbs, you have to use logical operators like *because, although,* and *if* to link the new sequences of clauses.

Although we lobbied Congress intensively, we could not acquire federal funds **because** other interests presented their needs more effectively.

• You may have been told to write short sentences.

In fact, there is nothing wrong with a long sentence if its subjects and verbs match its characters and actions. But even so, when we match subjects and verbs with characters and actions, we almost always write a shorter sentence. Compare the original and revised sentences we've looked at so far.

In short, when you observe this first pair of principles, you reap other benefits. Once you grasp the two root principles, you can apply them quickly, knowing that as you correct one problem, you are solving others. When you align subjects and characters, verbs and actions, you turn abstract, impersonal, apparently expository prose into a form that feels much more like a narrative, into something closer to a story.

I should clarify an often misunderstood point: clear writing does not require Dick-and-Jane sentences. Almost all of the revisions are shorter than the originals, but the objective is not curtness: what counts is not the number of words in a sentence, but how easily we get from beginning to end while understanding everything in between. This was written by an undergraduate attempting academic sophistication:

After Czar Alexander II's emancipation of the Russian serfs in 1861, many now-free peasants chose to live on a commune for purposes of cooperation in agricultural production as well as for social stability. Despite some communes' attempts at economic and social equalization through the strategy of imposing a low

I have established through these new data that **we must analyze** the problem in more detail.

With this evidence **I prove** my theory.

In the original sentences, the instruments act so much like agents that there is little point in revising them.

Some characters do not appear in a sentence at all, so that when we revise, we have to supply them:

In the last sentence of the Gettysburg Address there is a rallying cry for the continuation of the struggle.

In the last sentence of the Gettysburg Address, **Lincoln** rallied **his audience** to continue the struggle against **the South.**

In other sentences, the writer may imply a character in an adjective:

Determination of policy occurs at the **presidential** level.

The President determines policy.

Medieval **theological** debates often addressed what to **modern** thought seems to be metaphysical triviality.

Medieval **theologians** often debated issues that **we** might think were metaphysically trivial.

And in some cases, the characters and their actions are so far removed from the surface of a sentence that if we want to be explicit, we have to recast the sentence entirely.

There seems to be no obvious reason that would account for the apparent unavailability of evidence relevant to the failure of this problem to yield to standard solutions.

I do not know why **my staff** cannot find evidence to explain why **we** haven't been able to solve this problem in the ways **we** have before.

Most often, though, characters in abstract prose modify one of those abstract nouns or are objects of prepositions such as *by, of, on the part of:*

The Federalists' belief that the instability *of* **government** was a consequence *of* **popular democracy** was based on **their** belief in the tendency *on the part of* **factions** to further **their** self-interest at the expense of the common good.

The Federalists believed that **popular democracy** destabilized **government** because **they** believed that **factions** tended to further their self-interest at the expense of the common good.

Often, we have to supply indefinite subjects, because the sentence expresses a general statement:

Such multivariate strategies may be of more use in understanding the genetic factors which contribute to vulnerability to psychiatric disorders than strategies based on the assumption that the presence or absence of psychopathology is dependent on a major gene or than strategies in which a single biological variable is studied.

If **we/one/researchers** are to understand the genetic factors that make some patients vulnerable to psychiatric disorders, **we/one/ researchers** should use multivariate strategies rather than strategies in which **we/one/researchers** study only a single biological variable.

As flexible as English is, it does have a problem with indefinite subjects. Unlike writers of French, who have available an impersonal pronoun that does not seem excessively formal, English has no convenient indefinite pronoun. In this book, we have used *we* quite freely, because parts of this book are written by two people. But many readers dislike the royal *we* when used by a single writer, because they think it pretentious. Even when used by two or more writers, it can be misleading because it includes too many referents: the writer, the reader, and an indefinite number of others. As a consequence, many writers slip back into nominalizations or, as we shall see in a bit, passive verbs:

If the generic factors that make some patients vulnerable to psychiatric disorders **are to be understood,** multivariate strategies **should be used** rather than strategies in which **it is assumed** that a major gene causes psychopathology or strategies in which only a single biological variable **is studied.**

Verbs and Actions

As we'll use the word here, "action" will cover not only physical movement, but also mental processes, feelings, relationships, literal or figurative. In these next four sentences, the meaning becomes clearer as the verbs become more specific:

To revise such sentences,

(a) Change abstractions to verbs: *cessation → cease, loss → lose*.

(b) Find subjects for those verbs: *they ceased, they lost.*

(c) Link the new clauses with a word that expresses their logical connection. That connection will typically be some kind of causal relationship;

To express simple cause:	*because, since, when*
To express conditional cause:	*if, provided that, so long as*
To contradict expected cause:	*though, although, unless.*

Schematically, we do this:

Their **cessation** of hostilities	→	they **ceased** hostilities
was because of	→	because
their personnel **loss**	→	they **lost** personnel

More examples:

The **discovery** of a method for the **manufacture** of artificial skin *will have the result* of an **increase** in the **survival** of patients with radical burns.

—Researchers **discover** how to **manufacture** artificial skin
—More patients **will survive** radical burns

If researchers **can discover** how to **manufacture** artificial skin, more patients **will survive** radical burns.

The **presence** of extensive rust **damage** to exterior surfaces *prevented* immediate **repairs** to the hull.

—Rust had extensively **damaged** the exterior surfaces
—We could not **repair** the hull immediately

Because rust had extensively **damaged** the exterior surfaces, we could not **repair** the hull immediately.

The **instability** of the motor housing *did not preclude* the **completion** of the field trials.

—The motor housing was **unstable**
—The research staff **completed** field trials

Even though the motor housing was **unstable**, the research staff **completed** the field trials.

Useful Nominalizations

In some cases, nominalizations are useful, even necessary. Don't revise these.

1. The nominalization is a subject referring to a previous sentence:

These **arguments** all depend on a single unproven claim.
This **decision** can lead to costly consequences.

These nominalizations let us link sentences into a more cohesive flow.

2. The nominalization names what would be the object of its verb:

I do not understand either **her meaning** or **his intention.**

This is a bit more compact than, "I do not understand either **what she means** or **what he intends.**"

3. A succinct nominalization can replace an awkward "The fact that":

The fact that I denied what he accused me of impressed the jury.
My denial of his accusations impressed the jury.

But then, why not

When I **denied** his accusations, I **impressed** the jury.

4. Some nominalizations refer to an often repeated concept.

Few issues have so divided Americans as **abortion on demand.**

The Equal Rights **Amendment** was an issue in past **elections.**

Taxation without **representation** was not the central concern of the American **Revolution.**

In these sentences, the nominalization names concepts that we refer to repeatedly: *abortion on demand, Amendment, election, taxation, representation, Revolution.* Rather than repeatedly spell out a familiar concept in a full clause, we contract it into a noun. In these cases, the abstractions often become virtual actors.

And, of course, some nominalizations refer to ideas that we can express only in nominalizations: *freedom, death, love, hope, life, wisdom.* If we couldn't turn some verbs or adjectives into nouns, we would find it difficult—perhaps impossible—to discuss those subjects that have preoccupied us for millennia. You simply have to develop an eye—or an ear—for the nominalization that expresses one of these ideas and the nominalization that hides a significant action:

When *an actor* intends prospectively, *he* cognitively **represents** to himself what *he* **has done** similarly in the past, his current situation, and how *he* **intends** to act in the future. That is, when *an actor* intends prospectively, *he* **plans**. On the other hand, when *an actor* **plans** what *he* **intends** to do immediately, *he* **monitors** and **guides** his body as *he* **moves** it. When *we* **take** these two cognitive components together, *we* **see** that **they are highly complex. But** *our* beliefs about these matters on the basis of folk psychology are too simple. When *we* **consider** the cognitive component of intention in this way, *we* **see** that *we* **have to think** in ways other than folk psychology.

This passage illustrates the problem with finding an impersonal subject. Should we/one/the writer/you use as subjects *we, one, he, philosophers, anyone?*

Passives and Agents

In addition to avoiding abstract nominalizations, you can make your style more direct if you also avoid unnecessary passive verbs. In active sentences, the subject typically expresses the agent of an action, and the object expresses the goal or the thing changed by the action:

<div style="text-align:center">

subject   object

Active: The partners → broke → the agreement.

agent   goal

</div>

In passive sentences, the subject expresses the goal of an action; a form of *be* precedes a past participle form of the verb; and the agent of the action may or may not be expressed in a *by*-phrase:

<div style="text-align:center">

         be (past   prepositional

subject   participle)   phrase

Passive: The agreement ← was broken ← by the partners.

goal   agent

</div>

We can usually make our style more vigorous and direct if we avoid both nominalizations and unnecessary passive verbs. Compare:

> A new approach to toxic waste management detailed in a chemical industry plan **will be submitted**. A method of decomposing toxic by-products of refinery processes **has been discovered** by Genco Chemical.

> The chemical industry **will submit** a plan that details a new way to manage toxic waste. Genco Chemical **has discovered** a way to decompose toxic by-products of refinery processes.

Active sentences encourage us to name the specific agent of an action and avoid a few extra words—a form of *be* and, when we preserve the Agent of the action, the preposition *by*. Because the passive also reverses the direct order of agent-action-goal, passives eventually cripple the easy flow of an otherwise energetic style. Compare these passages:

> It **was found** that data concerning energy resources allocated to the states **were not obtained**. This action **is needed** so that a determination of redirection **is permitted** on a timely basis when weather conditions change. A system **must be established** so that data on weather conditions and fuel consumption **may be gathered** on a regular basis.

> We **found** that the Department of Energy **did not obtain** data about energy resources that Federal offices **were allocating** to the states. The Department **needs** these data so that it **can determine** how to **redirect** these resources when conditions **change**. The Secretary of the Department **must establish** a system so that his office **can gather** data on weather conditions and fuel consumption on a regular basis.

The second passage is a bit longer, but more specific and more straightforward. We know who is supposed to be doing what.

When we combine passives with nominalizations, we create that wretched prose we call legalese, sociologicalese, educationalese, bureaucratese—all of the *-eses* of those who confuse authority and objectivity with polysyllabic abstraction and remote impersonality:

> Patient movement to less restrictive methods of care may be followed by increased probability of recovery.

> If we treat patients less restrictively, they may recover faster.

But those are the easy generalizations. In many other cases, we may find that the passive is, in fact, the better choice.

Choosing between Active and Passive

To choose between the active and the passive, we have to answer two questions: First, must our audience know who is per-

Here are the first few words from several consecutive sentences in an article in *Science,* a journal of substantial prestige:

> . . . we want . . . Survival gives . . . We examine . . . . We compare . . . . We have used . . . . Each has been weighted . . . . We merely take . . . . They are subject . . . . We use . . . . Efron and Morris (3) describe . . . . We observed . . . . We might find . . . . We know. . . .[6]

Certainly, scholars in different fields write in different ways. And in all fields, some scholarly writers and editors resolutely avoid the first person everywhere. But if they claim that all good academic writing in all fields must always be impersonally third-person, always passive, they are wrong.

Metadiscourse: Writing about Writing

We now must explain, however, that when academic and scholarly writers do use the first person, they use it for particular purposes. Note the verbs in the passages cited: *cite, show, begin by inquiring, compare.* The writers are referring to their acts of writing or arguing, and are using what we shall call *metadiscourse.*

Metadiscourse is the language we use when, in writing about some subject matter, we incidentally refer to the act and to the context of writing about it. We use metadiscourse verbs to announce that in what follows we will *explain, show, argue, claim, deny, describe, suggest, contrast, add, expand, summarize.* We use metadiscourse to list the parts or steps in our presentation: *first, second, third, finally;* to express our logical connections: *infer, support, prove, illustrate, therefore, in conclusion, however, on the other hand.* We hedge how certain we are by writing *it seems that, perhaps, I believe, probably,* etc. Though metadiscourse does not refer to what we are primarily saying about our subject, we need some metadiscourse in everything we write.

If scholarly writers use the first person at all, they predictably use *I* or *we* in introductions, where they announce their intentions in metadiscourse: *We claim that, We shall show, We begin by examining.* If writers use metadiscourse at the beginning of a piece, they often use it again at the end, when they review what they have done: *We have suggested, I have shown that, We have, however, not claimed.* Less often, scholarly writers use the first person to refer to their most general actions involved in research-

ing their problem. This is not metadiscourse when it applies to the acts of research: *we investigate, study, examine, compare, know, analyze, review, evaluate, assess, find, discover.*

Academic and scientific writers rarely use the first person when they refer to particular actions. We are unlikely to find passages such as this:

> To determine if monokines directly elicited an adrenal steroidogenic response, **I added** monocyte-conditioned medium and purified preparations of . . .

Far more likely is the original sentence:

> To determine if monokines directly elicited an adrenal steroidogenic response, **monocyte-conditioned medium and purified preparations . . . were added** to cultures . . .

Note that when the writer wrote this sentence in the passive, he unselfconsciously dangled his modifier:

> To determine . . . medium and purified preparations were added . . .

The implied subject of the verb *determine* is *I* or *we; I determine.* But that implied subject *I* or *we* differs from *medium and purified preparations,* the explicit subject of the main verb *added.* And thus dangles the modifier: the implied subject of the introductory phrase differs from the explicit subject of the clause.

Writers of scientific prose use this pattern so often that it has become standard usage in scientific English. The few editors who have stern views on these matters object, of course. But if they do, they must accept first-person subjects. If they both deprive their authors of a first-person subject and rule out dangling modifiers, they put their writers into a damned-if-you-do, damned-if-you-don't predicament.

As a small historical footnote, we might add that this impersonal "scientific" style is a modern development. In his "New Theory of Light and Colors" (1672), Sir Isaac Newton wrote this rather charming account of an early experiment:

> I procured a triangular glass prism, to try therewith the celebrated phenomena of colors. And for that purpose, having darkened my laboratory, and made a small hole in my window shade, to let in a convenient quantity of the sun's light, I placed my prism at the entrance, that the light might be thereby refracted to the opposite