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Using hypotheses: The core of investigative method

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The process so far:

We discover a subject.

We create a hypothesis to verify.

A hypothesis is a story and a method for testing it

eporters are always complaining that editors refuse their great story ideas. Sure, it happens. But often, what the editor refuses isn't a story at all. It's an invitation to disaster – a poorly planned inquiry that will burn time and money for a very uncertain result. When we were younger we offered a few of these lame horses to editors, and we were very lucky that they nearly always shot the stupid beasts dead before we could mount them.

For example, saying "I want to investigate corruption" is not a great proposition for an editor. Of course corruption exists, everywhere in the world. If you spend enough time looking for it, you'll find some. But corruption in and of itself is a subject. It is not a story, and what journalists do is tell stories. If you pursue a subject instead of a story, you may become expert in the subject, but a lot of time, money and energy will be wasted along the way. And that's why any editor with a brain will tell you, "No."

If instead you say, "Corruption in the school system has destroyed parents' hopes that their children will lead better lives," you are telling a specific story. That's already more interesting.

Whether you know it or not, you are also stating a hypothesis – because you have not yet proven that your story is the right one.

You are proposing that corruption in the schools exists, and that it has devastating effects on at least two groups of people, parents and children. That may or may not be true; you still have to get the facts.

In the meanwhile, your hypothesis defines specific questions that must be answered if you want to find out whether or not it makes sense. This happens through a process in which we take apart the hypothesis and see what separate, specific claims it makes. Then, we can verify each of those claims in turn. Moreover, we will also see what we mean by the words we use to tell the story, because we have to discover and define their meaning to get anywhere.

You can answer these questions in any order, but the wisest order is almost always the one that you can follow most easily. Any investigation will become difficult sooner or later, because it involves a lot of facts, a lot of sources – which means a lot of organising your material – and a lot of worrying over whether you got the story right before risking your reputation.

In our hypothetical example, probably the easiest place to start is by talking to parents and children about their hopes and their despair.

Once you have found at least four sources who confirm to you that there is indeed corruption in the schools – less than four is a very risky base to stand on – you can start looking at how the school system functions. You will need to study its rules, its procedures, its stated ideals and mission.

When you know how the system functions, you will see the gray and black zones in which corruption can occur. You can then compare the reality of what you have heard and discovered to the system's claims.

HERE'S A GRAPHIC WAY OF LOOKING AT THIS PROCESS

First, we set out the hypothesis

> Now we separate the different terms it includes

> Next we define each term more closely, and see what questions it generates

What exactly do we mean by "corruption?"

> Bribes, favoritism, nepotism in hiring?

How does it work in the schools, if it exists at all?

Which parents have

experienced corruption?

education would help to achieve those dreams?

What are their hopes? How did they think

Corruption

in the school system

What kind of schools, how many?

Does corruption work the same way in each?

What rules are supposed to forbid corruption?

Why aren't they working?

What different kinds of

people work in the system, and how are power and rewards distributed among them?

has destroyed parents' hopes

that their children

Are the children aware of what is going on?

If so, how does it affect them?

will lead better lives.

Does education really make life better for children?

How?

--Story-Based Inquiry: A manual for investigative journalists

The advantages of hypothesis driven investigation

oes the above example sound like a lot of work? That's because it is a lot of work – but only if you compare it to the way most news stories are written, which is by talking to a source or two or rewriting a press release. If you compare the hypothesis method to most other ways of investigating, the labor-saving advantages are obvious:

1. A hypothesis gives you something to verify, instead of trying to uncover a secret.

People do not give up their secrets without a very good reason. They are much more likely to offer confirmation of information that is already in your possession, simply because most people hate to lie. A hypothesis enables you to ask them to confirm something, rather than to advance information. It also puts you in the position of someone who is open to discovering that there is more to the story than he or she thought at first, because you are willing to accept that there are facts beyond what you suspected at the start.

2. A hypothesis increases your chances of discovering secrets.

A lot of what we call "secrets" are simply facts that no one ever asked about. A hypothesis has the psychological effect of making you more sensitive to the material, so you can ask those questions. As the French investigator *Edwy Plenel* said, "If you want to find something, you

have to be looking for it." We would add that if you're really looking for something, you'll find more than you were looking for.

3. A hypothesis makes it easier to manage your project.

Having defined what you're looking for, and where to start looking for it, you can estimate how much time the initial steps of the investigation will require. This is the first step to treating an investigation as a project that you can manage. We'll return to this point at the end of this chapter.

4. Hypotheses are a tool that you can use again and again.

When you can work in a methodical way, your career will change. More important, you will change. You will no longer need someone to tell you what to do. You will see what needs to be done to combat some of the chaos and suffering in this world, and you will be able to do it. Isn't that why you became a journalist in the first place?

5. A hypothesis virtually guarantees that you will deliver a story, not just a mass of data.

Editors want to know that at the end of a specific period of time – a specific investment of resources – there will be a story to publish. A hypothesis hugely increases the likelihood of that outcome. It enables you to predict a minimum and maximum positive result for your work, as well as a worst case.

- The worst case is that verification of the hypothesis will quickly show there is no story, and the project can be ended without wasting significant resources.
- The minimum positive outcome is that the initial hypothesis is true, and can be quickly verified.
- The maximum is that if this hypothesis is true, others must logically follow, and either a series of related stories or one very big story will result.

There are even more advantages, but before going further, let us give you a word of warning.

Hypotheses can be dangerous

eginning reporters worry a lot about what will happen when they get a story right. Will there be vengeance? Will they be sued? Experienced reporters know the worst problems happen when you get a story wrong. Of course they can be sued, and sometimes they can be thrown in jail, whether they are right or wrong. But less apparently, telling an untrue story makes the world a sadder, uglier place.

So keep this in mind, please: If you merely try to prove at any cost that a hypothesis is true, regardless of the evidence, you will join the ranks of the world's professional liars – the crooked cops who condemn the innocent, the politicians who sell wars as if they were soap. Investigation is about more than proving you are right. It's about finding the truth. Hypothesis-based investigation is a tool that can dig up a lot of truth, but it can also dig a deep grave for the innocent.

Specifically, to make the world worse, all you need to do is leave out the facts that disprove your hypothesis. Or you can be careless (mistakes probably add as much to the confusion and suffering of the world as outright lies). Either way, you make your job easier, and you let someone else clean up the mess. Plenty of people do so every day, but that doesn't make it acceptable. Our theory is that there are lots of journalists in Hell, and misusing hypotheses is one way they got there. So be honest and careful about how you use hypotheses: Try to disprove them as well as prove them. We will say more about this subject in Chapter 7, "Quality Control."

How hypotheses work

1. Why it doesn't matter if the first hypothesis is true

Framing an investigation as a hypothesis is a procedure as old as science, and it is used successfully in domains as different as police work and business consulting. (In fact, it is an aberration that it has only recently been imported into journalism as a conscious method.) In essence, it is based on a mental trick. You create a statement of what you think reality may be, based on the best information in your possession, and then you seek further information that can prove or disprove your statement. This is the process of verification. As we showed above, if the entire hypothesis can't be confirmed, its separate terms can nonetheless be verified. If not, go back to step one and make a new hypothesis. A hypothesis that can't be verified in whole or part is mere speculation.

If the statement is reaffirmed by the evidence, that's great: You have your story. Less apparently, it's also great if the statement is not true, because that means there may be a better story than the one you originally imagined.

2. Structuring the hypothesis to succeed

The initial hypothesis should be no longer than three sentences, for two very good reasons. If it is longer than that, you can't explain it to someone else. More important, if it is longer than that you probably don't understand it yourself.

The hypothesis is stated as a story. This matters hugely, because it means that you end where you began – with a story. We are not just collecting facts, we are telling stories that we hope can change the world. The hypothesis will help you to explain the story to others, starting with your editor and publisher, and then to the public.

In its most basic form, the story is nearly always a variant of these three sentences:

- We are facing a situation that is causing great suffering (or that deserves to be more widely known as a good example)."
- This is how we got to this point.
- This is what will happen if nothing changes... and here is how we could change things for the better."

Notice something about these sentences: They have an implicit chronological order. It may not seem apparent, because the order is not a straight line from the past to the future. Instead, it tells us:

- The news of the problem, which is the present;
- The cause of the problem, in the past.
- What must change for the problem to end, in the future.

Thus, when we compose our hypothesis, we are already beginning to compose a narrative – a story that involves people who move through a particular place and time. One of the most difficult things in investigation is to keep your focus on the narrative, and not to get buried by the facts. Your hypothesis can help you. When you feel overwhelmed, stop digging and start looking at the story your facts are trying to tell you. If they don't fit the original hypothesis, change it. After all, it's just a hypothesis.

By the way, it can be very, very difficult to show how we can put an end to a given problem. Sometimes, the best you can do is to denounce an injustice. But often, someone connected to your story has looked for a solution. Don't neglect to look for that person.

3. The four keys to making hypotheses effective

Using hypotheses is not a complicated trick, but unless you are a lot more gifted than us (we accept this possibility), it will take you several tries before the method is natural to you. There are four things you need to keep in mind to make it work:

Be imaginative.

Normally journalists react to situations. They report what they see or hear or read, or follow up on yesterday's news. An investigator is trying to reveal something that is not yet known. He or she is not just covering news, but making it. So he or she necessarily makes a leap into an uncertain future. That means trying to picture the story, and this is creative work.

Be very precise.

If you use the word "house" in your hypothesis, is it a villa, or a penthouse, or a shack? The answers matter. The more precise you can be about a presumed fact, the easier it is to verify.

Use your experience.

If you have seen how the world works in certain ways, that may be applicable to the story you are trying to prove. Your experience can help to furnish a hypothesis. Please remember that even the most experienced people can be surprised by something they never saw before, and even self-respecting people can discount their own experience.

Example:

A massive consumer boycott in France failed, according to the target company. The media accepted the company's version. We began an investigation that proved the contrary when we realised that everyone we knew had boycotted the company.

How could there be no effects?

Be objective.

By objectivity, we mean three very precise things.

• The first is that we have to accept the reality of facts that we can prove, whether we like them or not. In other words, we are objective toward the facts. If the facts say the hypothesis is wrong, we change the hypothesis. We do not try to make the facts disappear.

- The second is that we have to do this work with the understanding that we could be wrong. If we do not keep that in mind, we will not get the help we need from others. Would you help someone who already knows all the answers, and isn't listening to what you have to say?
- Even if you remain objective toward the facts and you must there is a subjective basis to this work that will not go away. Trying to make the world a better place is not an objective goal. We are not recorders when we investigate; we are reformers.

We use objective facts, and are objective toward the facts, to further that goal, because we happen to believe that any attempt to reform the world will fail if it is not based on reality. In other words, we use our subjectivity as an incentive to remain neutral toward the evidence, and to incite us to take all the evidence into account.

4. What if the facts go against your wonderful hypothesis?

Easy: accept the facts, and make a new hypothesis.

The difficulty here is to neither cling too hard to a mistaken hypothesis, nor leap in a new direction at the first contrary fact. The best sign that something is wrong comes when you are finding a fair amount of information, but it doesn't make sense. When that happens, either you are looking at the wrong information, or it makes sense only when you have changed your hypothesis.

Using the official version as a hypothesis

t isn't always necessary to create a hypothesis. Sometimes the reporter can treat an official statement, or an anonymous tip, as a detailed hypothesis that demands verification – a simple technique that can have amazing results.

Remember an important principle: Most investigations are about the difference between a promise and the reality of whether or not it was kept. Thus the official promise often serves as a hypothesis, and verification shows whether or not the promise has been kept.

Example:

One of the greatest stories in the history of investigative journalism, the revelation of France's "Contaminated Blood Affair", began like this: Reporter Anne-Marie Casteret was contacted by a hemphiliac. Hemophiliacs are men with a genetic disorder that suppresses clotting factors in the blood, so even a slight cut in the skin can lead to unstoppable, fatal bleeding. At the beginning of the AIDS epidemic, he claimed, a French government agency had deliberately and knowingly sold hemophiliacs and their families special blood products that were contaminated by the AIDS virus.

Casteret went to see the head of the agency, who told her: "It's true that the hemophiliacs were contaminated by AIDS in our products. But...

- "At the time no one knew that AIDS was in the blood supplies we used to make the products.
- "No one knew how to make safer products, so none were available on the market.
- "The best thing we could do was to make sure that we didn't spread the virus further, by making sure that no one who was not yet infected received contaminated products."

That was the official story, and it makes coherent, logical sense. But when Casteret started checking it as though it were merely a hypothesis, she gradually discovered that none of the facts it contained could be proved. On the contrary:

- The scientific literature showed that the problem of AIDS in blood supplies was known at the time. (In fact, the agency was warned that its own supplies were infected.)
- There were pharmaceutical companies and other government agencies who knew how to make safe products, but they weren't listened to.
- The agency that sold the contaminated goods had no idea of whether or not the people who used the infected products were healthy or not, because they had no tests for AIDS infection. And in any case, it is terrible medical practice to re-infect people who are already sick.
- In the end, faced with incontrovertible evidence that all of its products were contaminated by AIDS, the agency made the decision to continue selling them until it had used up all the contaminated stocks.

It took Casteret four years to get all of that story. Were they worth it? Well, the story put a few white-collar criminals behind bars, it gave some victims the comfort of knowing they were not alone, it led to the electoral defeat of a government that tried to conceal the scandal, and it forced reforms of a health system that had become a killing machine. If you won't take the time to do a job like that, you can still be a journalist, but you shouldn't be an investigator.

You may be wondering why no one but Casteret took the time. The main reason – aside from the fact that at least one of her competitors worked on the side for the same people who committed the crime – is that no one could believe that respectable people could do such a thing. We will tell you something more than once, and this is a good time to start: More investigations are sabotaged by reporters who can't accept the truth of what they've found than by targets seeking to protect themselves.

Start with a strategy!

ake time to consider your investigative strategy – the order in which you will execute specific tasks, and how they will fit together. Believe us, in the end this will save you a lot of time. This will require an initial list of questions that must be answered. (For example: Who makes blood products? How do they know whether their products are safe or not?)

It is a very good idea to begin research with the easiest questions, meaning those you can answer with information that does not require talking to people. Generally, the first impulse of a news reporter is to pick up the phone and start asking questions. We are of course not saying that you should not talk to people. What we are saying is that there are a lot of advantages if you start research in a way that makes no noise. Once you are further down the path, a great many people will know what you are doing.

That is why you need to know whether or not there are open sources – public documents, news reports, and so on – that can serve to verify of elucidate parts of your hypothesis. If so, consult them first. You will have a better understanding of the story before you speak to people, and they will appreciate it.

At the Center for Public Integrity in the US, beginning investigators are required to do several weeks of research before they are allowed to call sources. You may not need that much time. But if you're like us and nearly all the hundreds of people we have taught to investigate, you do need to break the habit of relying on other people for information that you can find yourself. In the next chapter we will look at how to find and use open sources in detail.

A case study in hypothesis-driven inquiry: The **Tragedy of Baby Doe**

et's consider an extended example of how hypothesis-based investigation works. It began when we were told by the boss to investigate a tip from one of his friends. The friend said: "Doctors are killing prematurely-born babies to stop them from growing up with handicaps." The boss made it clear that if we didn't get the story, we would lose our job.

1. Isolating the terms, finding open sources

What's wrong with this story? For a start, do you really believe that a bunch of mad doctors, trained in saving lives, have suddenly turned into baby-killers? Did you ever see a doctor wearing a pin that says, "I kill babies as a public service"? Neither did we. Just where do you think you'd find them, assuming they exist? Are you going to call a hospital and ask, "Got any killers there?" Us neither.

What's right with this story, however, is that it contains several terms we can verify:

What kind of doctors deliver prematurely-born babies? (If you said "obstetricians", you're wrong.)

"Doctors/ are killing/

How do you kill a baby in a hospital?

How many babies are born prematurely? Is the number rising or falling?

prematurely-born babies/

to stop them from growing up with

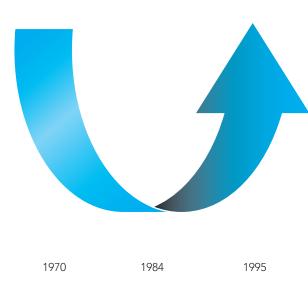
/handicaps/."
What kind of handicaps do they have?
Is the number of handicapped children rising or falling?

> The hardest thing to verify above is how you would kill a baby in a birthing ward. (No, you cannot just call a hospital and ask: "Have you killed any babies lately? How?") So we put that aside. Instead, we looked for the right medical specialty, which would enable us to peruse the latest medical literature, and we also sought statistics on premature birth and handicaps. They were all freely available at the local library – the archetypal example of an open source.

2. The first analysis: Does the hypothesis stand up?

The next step was to pull the data together a little, to see if they supported our hypothesis. From the national statistics on birth weights for babies, the standard measure of prematurity, and scientific studies that gave handicap rates for these children, we discovered a trend curve that looked like this:

NUMBER OF PREMATURELY-BORN AND HANDICAPPED BABIES IN THE USA, 1970-1995



In other words, from 1970 to 1984 the number of prematurely-born babies fell sharply. Since prematurity is also associated with handicaps, the number of handicapped kids fell, too. Then from 1984 on, the numbers rose again, inexorably.

Does this support or deny our hypothesis? Neither. This data doesn't tell us whether there are baby killers out there. Maybe the fact that the number of handicapped, prematurely-born kids went up again after 1984 inspired some crazies to stem the tide. We don't know yet. Nor do we know whether these crazies were at work from 1970-1984, and then decided to stop before they were caught. All we know is that something changed in 1984.

3. Further verification

We returned to the library to collect more scientific articles on handicapped, prematurely-born kids. One of the articles referred to something called "Baby Doe." We called the author and asked her what "Baby Doe" meant.

She replied: "It's a law that requires us to make every possible effort to save the lives of prematurely-born babies, regardless of their handicaps or the wishes of the parents."

That single fact could destroy our hypothesis – if, that is, the law was enforced. So we asked if doctors obeyed the law. "We have to," she said. "There's a hot line to call the prosecutor in every hospital. If someone thinks you're not doing your job, you get arrested." We asked if she knew of places where that happened. Yes, she did. (Later, we obtained reports on enforcement from a Federal agency.)

Then we asked when the law had taken effect. You guessed it: 1984.

The original hypothesis looks very weak right now. But a new hypothesis is taking shape: "A law passed in 1984 forbade doctors to allow severely handicapped, prematurely-born babies to die a natural death at birth. The result is a new population of the handicapped."

In the following days we documented that population, because we needed to see how big the story might be. First we calculated the additional numbers of prematurely-born babies who survived, thanks to that law, between 1984 and 1995 – that is, babies who would previously have been allowed to die. This was a simple matter of subtracting the figures for premature births in 1983, the last year before the law took effect, from the figures for succeeding years. Then we calculated how many would be born with handicaps, based on scientific studies that correlate prematurity with handicaps.

Then we checked with epidemiologists, because we are not doctors or mathematicians, and we could be wrong. More important, we couldn't believe the numbers we had calculated. It looked like there were at least a

quarter-million severely handicapped children – blind, paralyzed, awfully retarded – because of that law.

The experts said our numbers looked right. But there was another crucial part of the story, and it required a new hypothesis. Which brings us to a key part of the process.

4. Make new, subsidiary hypotheses to account for different angles of the story.

Depth research nearly always turns up new story possibilities that were unknown when the investigation began. They often require new hypotheses that can be verified in turn. If they're not related to your original investigation, you may choose to ignore them for the moment.

But sometimes, the new discovery may be more important than what you were seeking in the first place. And other times, the new hypotheses will illuminate your initial hypothesis in a startling way. If so, you will lose the opportunity for a major story if you ignore them.

In the case at hand, we have powerful statistical evidence that a quarter-million handicapped children had been kept alive because of an obscure law. But that raises a question: What happened to those kids?

We noticed that the USA had just reformed its social security laws to make it more difficult for people to obtain benefits. The population that receives benefits – poor, and largely non-White – also suffers disproportionately from premature births. So our hypothesis was: "The welfare reform will make it harder to take care of prematurely-born, handicapped children." Very quickly, we obtained open source verification.

There were still plenty of facts to come, but the story we wanted to investigate was in place. We went to see the boss, and said:

"Boss, we can't prove your story. You can fire us if you like. But this is a story we can prove:

- A law passed in 1984 forbade doctors to allow severely handicapped, prematurely born babies to die a natural death at birth.
- The result was a quarter-million crippled kids, and we cut their social security.
- One law forced crippled children to live, and another law threw them on the street.
- Do you want to help change those laws, boss?"

Remember this: If your boss tells you "no" in a situation like this, it's time to find another boss. The original hypothesis, which we had shot down, was the boss's. Bad journalists try to make the facts fit their hypothesis. Good journalists change the hypothesis to fit the facts, whether they like the facts or not.

No, he didn't fire us. We published the story and won two prizes for it (you can find this and other works through our bibliography at the end of this manual). But the laws are still on the books. Do we regret that? Yes. But we'd regret it even more if we never told the story.

Using hypotheses to manage an investigation

anaging means nothing else than formulating targets and making sure, through constant checks, that the targets are met. It is standard procedure in every well-run organisation in the world, with the usual exception of journalism.

We suggest that once you have defined a hypothesis and obtained evidence that it appears valid, you set down the following parameters of the project:

1. Deliverables:

What is the minimum that you can commit to delivering, in terms of finished stories? What is the maximum?

- We suggest that the minimum be a single original story, based on the initial hypothesis or a different hypothesis discovered through verification. If the hypothesis is of sufficient richness, it can be expanded to a series or a long-form narrative. Do not promise more than you can deliver, and try not to accept less than the project deserves.

2. Process milestones:

How much time will you need to consult the first open sources? When will you contact and interview human sources? When will you be ready to begin drafting the story or stories?

- We suggest that the reporter and involved colleagues conduct a weekly review of progress. Verification of the hypothesis and discovery of new information are the first concerns, but whether or not the project is on track in terms of time and costs also matters. Delays which threaten the future of the project must not be tolerated. Individuals who do not deliver on commitments should be released from the team.

3. Costs and rewards:

Besides your time, which is hardly worthless, there may be travel, lodging, communications and other costs. What are they? Be as complete as you can.

- If the reporter is working independently, he or she should consider whether these costs will be justified in terms of additional revenues, new knowledge or skills gained, new contacts, prestige or other opportunities. The organisation must consider whether the project costs can be amortised through increased sales, prestige or reputation. All involved must consider whether the project is justified from a public service perspective. All of these parameters are forms of value.

4. Promotion:

Who will this story interest? How can this public be made aware of the story? Will this involve additional costs (including your time and the time of others)? What benefits can be gained for you or your organisation through this investment?

- It makes absolutely no sense to invest in an investigation that is not promoted by the media which publish it. Moreover, promotion decreases the risks of counter-attack by targets, on condition that the investigation is accurate, because it attracts the attention of potential allies. Promotion can be as simple as a headline, or as complex as using Internet forums to generate "buzz." We will discuss this more fully in Chapter 8.

These processes can be abused. For example, an editor can set unrealistic targets, with the unspoken goal of making a reporter fail. But nearly always, it's very valuable to replace daily deadlines with some other structure in which there are expectations to be met.

When all goes as it should, the hypothesis and its verification will serve as benchmarks for your progress, and as indicators of what must be done next. It is also smart to think beyond the story itself, to how it will be received by the public. Your hypothesis, which gives your story in a few sentences, is the tool that will enable you to interest others.

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Stay focused on the story

lways remember: Every hypothesis set forth by a reporter must be framed as a story that could be true. It contains news, a cause, and a solution. This means that by keeping the hypothesis firmly in view, the reporter is focused on the story, not just the facts.

The facts may be the basis of your story, but they don't tell the story. The story tells the facts. No one can remember three lines from an address book, but everyone remembers a story about every name in their address books. By framing your investigation as a story (that may or may not be true, remember) from the beginning, you don't just help your eventual readers or viewers to remember it. You also help yourself to remember it. Believe us, that's the hardest part of investigating – to remember the story as the facts add up.

Take the time to become expert at this method. Practice it every time you investigate. It will make you lucky, and it will allow you to repeat your luck.

And now, let's see where we can find our open sources – or as we like to call them, **"open doors."**