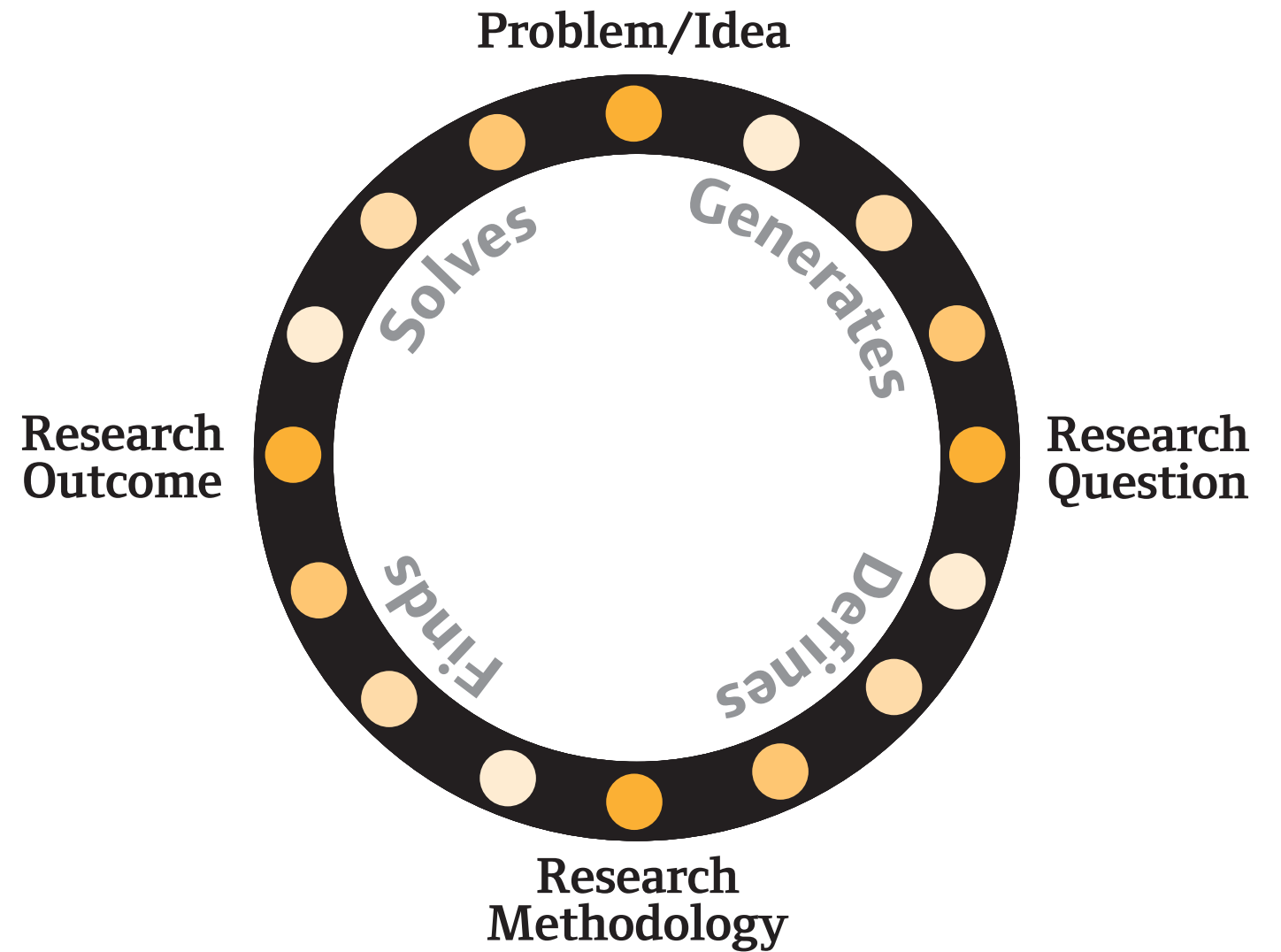## 3. Analysis and Proposition

Recording, evaluating and documenting a range of visual and verbal structures, languages and identities

Research and Design

Research methods can be defined as ways of approaching design problems or investigating contexts within which to work. This chapter focuses on thematic approaches to problem solving and the construction of rational and logical systems of design thinking. By improving their knowledge of existing visual conventions, together with the development and application of a personal visual vocabulary, designers are able to make more effective use of their perceptions and discoveries, and to work practically and creatively with reference to a wider cultural context. Systematic research methods encourage designers to develop a personal and critical point of view through the recording, documenting and evaluating of visual and verbal structures, languages and identities in the wider environment, and then applying those findings within their own work.

The adoption of a rigorous methodology that addresses the specific requirements of the brief and sets a series of boundaries within which to work on a broader investigation can help the designer to focus a project and define the exact problem, or series of problems, to address. Breaking the project down into a set of intentions, each with defined parameters and a predetermined level of background knowledge or experience on the part of the designer, makes the task more achievable and the goals of each stage of the process more explicit. Each of these areas will be explained in detail within this chapter, showing the developmental process of a strategic design methodology relevant to the context of the brief. Examples of work illustrating key concepts from both the professional and academic fields are included to guide you through each stage of the process.

Problem/Idea

Generates

Research Question

Defines

Research Methodology

Finds

Research Outcome

Solves

Research
A critical investigation or a search or enquiry to discover new facts and information or to collect and collate old data in order to evaluate and test hypotheses or design proposals. This would encompass the study of a subject, employing the analysis of quantitative and/or qualitative data.

Research employs methods and schemes of testing to interpret events, facts or information, and is a process of observation, discovery and recording. In the context of graphic design, research provides the foundations of the design process of problem solving and visual communication. The research component of a graphic design brief can take a singular form in some projects, such as the collation of audience feedback to a proposal, or it can operate in a number of forms simultaneously, each body of research findings working together

and in tandem to inform the overall approach to a project.

In recent years, graphic design has grown to accommodate a wide variety of approaches and intentions. Significantly, for a number of designers, research is a central and defining activity in their work. In these cases, research is more than an activity used to define effective visual solutions to a client's brief or design problem.

It instead becomes an outcome in its own right, informing a designer's or design group's approach, and generates a way of developing new ideas and techniques of thinking and making. The act of designing can in itself then lead to new discoveries and insights into the subject under investigation.

02 The Design Cycle >>
Design is an iterative process. While much design may be geared toward finding an optimum solution for a given problem, this process in itself raises further questions and contexts through which to develop alternative and innovative outcomes.

Pure Research
The investigation of graphic and visual languages in a propositional sense, rather than those which have a predetermined commercial application. Although this form of research may not lead to 'real world' practical solutions, this does not obviate the need for a thorough analysis of the context of the work in relation to potential audience and the stated project intentions.

The outcomes of pure research are propositional and offer potential visual solutions to as yet undefined questions – in some cases, they define the problem yet to be solved.

Applied Research
Applied research is the investigation of a practical problem, usually with the underlying intention of creating potential practical solutions.

Empirical Research
Investigation into a field of study that is based on direct observation of phenomena.

Deductive Research
Research which starts from the position of a general conclusion, and then searches for data to support it.

Research and Design

These examples will also help to define each specific area of investigation explored and undertaken by the individual designer concerned.

The first task for the designer is to identify what he or she is attempting to achieve with the project – a broad intention or set of intentions. Within commercial practice, this might be described in the brief as the message to be communicated, or the target market that a commercial enterprise wishes to engage with. In this instance, the work undertaken is a form of applied research. Alternatively, in an academic context the aim might be broader; such as the proposal of a concept, or an idea for the student to visually investigate and respond to. In this case, the work undertaken is a form of pure research. In either case, the terminology may vary (see diagram page 61), and the distinctions between different stages of the process may be more or less defined,

but the breaking down of the proposal into separate areas of investigation and the definition of a project rationale is a useful preliminary exercise. Any design brief can be broken down into three areas for specific interrogation: a field of study or context of the project, a project focus (often described as the research question) and a research methodology.

The field of study (where will the work be situated, what already exists in relation to the problem being investigated, and what function will the end result fulfil?) describes the context for the work. This could be the field of wayfinding and signage within information design, or an audience-specific magazine page layout. First, the designer must research their field of study, to acquire knowledge of what already exists in that area, and the range of visual languages that can be directly associated with the specific target audience or market for the design.

Practical Problems
A practical problem originates in the real world and is related to pragmatic issues, and conditions such as cost, production and technology. It may also be influenced by its context, for example, the need to explore legibility and typographic form in relation to public signage for the visually impaired. This is an applied area of research and investigation, in that the solution itself may lie in constructing or posing a specific

research problem. The outcomes of applied research are tangible and offer real world or commercial solutions to already existing needs.

Research Problems
A research problem is typically developed in response to a subject or theme that the designer does not know or fully understand. A research problem may arise from, or be motivated by, a practical problem to be resolved – a field of study.

This then helps to define the project focus of the research and provides a specific question to be explored.

The research, investigation and development – the body of knowledge and understanding gained through research – is then applied to a practical situation or problem. Sometimes this is referred to as pure research and its outcomes are frequently conceptual, for instance in the development of an

appropriate visual vocabulary for a specific theoretical context.

03 Design Process Stages >>
Design requires the adoption of appropriate methods as a response to a defined question or hypothesis. The gradual 'narrowing down' of the field of operation, and the refinement of a specific question, allows the designer to adopt an effective working rationale.

Field of Study

Focus

Methodology

Research and Design

This would normally be done through a visual audit or survey of the proposed design context.

The designer needs to consider both the external position of their intended work (the explicit aim of the communication itself) and its internal position (the relationship between this particular piece of visual communication and others within the same context). This is very important, as contemporary cultures are saturated with advertising, information graphics, site-specific visual identities and images related to entertainment or decoration. If a piece of graphic communication is to be displayed within this arena, the designer needs to be aware of how it relates to competing messages, and how the problems of image saturation or information overload might be resolved in order to communicate effectively. Of course, the designer will become more familiar with a specific field of study through professional experience.

By building a relationship with a particular client and their audience, the designer can learn which forms of communication are likely to be more (or less) effective. Field of study research then becomes more intuitive, based on prior experience, accumulated knowledge and learning, and the designer can move more quickly toward an appropriate project focus and methodology.

Choosing a Research Model

Field of study research takes a variety of forms, dependent on the intention of the proposed work. Market research methods, such as intensive visual audits of existing material, might be appropriate to some briefs, whereby the designer seeks out other work in the same field and analyses and compares the visual forms of communication relevant and readable to a specific audience.

Types of Research
There are several approaches to research often undertaken in relation to a graphic design brief. Some simple definitions by Meredith Davis include:

Descriptive Research
Observes and describes phenomena.

Historical Research
Seeks to reveal meaning in the events of the past. Historical

researchers interpret the significance of time and place in ways that inform contemporary decision making or put current practices into perspective.

Analytical Research
Generates quantitative data that requires statistical assistance to extract meaning. Analytical research requires testing and estimation and is particularly concerned with relationships and correlations in an attempt to predict outcomes.
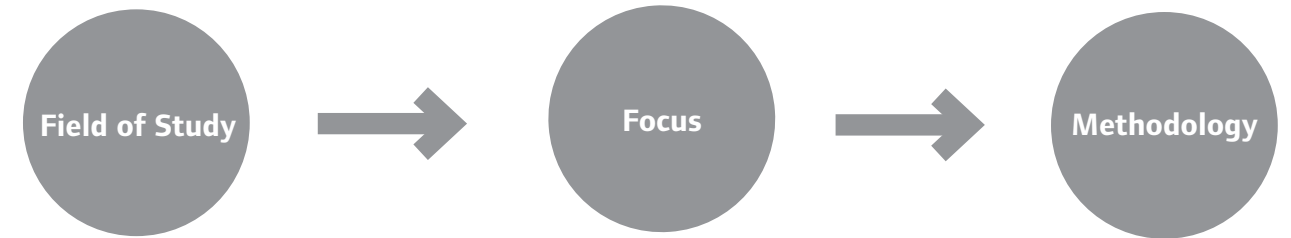
Experimental Research
Attempts to account for the influence of a factor in a given situation. Experimental research defines relationships of cause and effect by changing the factor to be studied in a controlled situation.

Meredith Davis
'What's so Important about Research?' Statements, American Center for Design (ACD), Vol.6, No.1 (Fall 1990)

04 Research Project Models >>
Design methodologies may involve the broad 'scoping' and definition of a problem prior to design action, or alternatively the evaluation and refinement of a question through physical interventions within the field of study.

Field of Study → Focus → Methodology

Context-Definition

Context: Field of Study

↓

Focus: Research Question

↓ ↓ ↓ ↓

Context-Experiment

Context: Field of Study

↓ ↓ ↓ ↓

Focus: Research Question

↓

Context-Definition
Initial work in this model usually involves a thorough analysis of a broad range of secondary research, mapping the territory to be investigated and determining the range of work that has already been done within the field. Once a solid understanding of the context has been reached, the focus and research question for the project can be determined, and a working methodology defined. Primary research is usually beneficial at this stage, in the form of direct surveys of target audiences and visual experimentation to test appropriate visual languages.

The results of these preliminary visual and contextual experiments can then help to define the specific project intention, together with an appropriate methodology that allows the testing of a range of potential outcomes.

Context-Experiment
Initial work in this model usually involves looser mapping of the territory to be investigated, an analysis of the range of work which has already been done within the same context, and a specified intention for the work within any revised context.

The focus for the project needs to be determined earlier than in the context-definition model, particularly through the definition of what the designer, and the client where appropriate, wishes to achieve. Distinct visual experiments to test appropriate visual languages and strategies are then conducted in order to determine a range of potential solutions. It is important that an overarching strategy is employed by which to critically evaluate and reflect upon the relationship between each individual experiment.

Research and Design

This could mean a review of comparative products or visual systems, working with a client to establish their position in the marketplace or their aspirations to communicate with a particular audience. In most cases, sophisticated visual languages already exist that attempt to engage those audiences, and the designer should become familiar with their vocabulary, even if his or her intention is to create a new form of communication that sets itself in opposition to that which already exists (i.e. what might be called an innovative or creative solution).

Cost implications are also important to consider at this stage of the project. The costs of materials, print reproduction or other media (web design, digital storage and so on.), labour and overheads all need to be taken into account against the intended budget for the project. The designer and client need to have a strong idea of the range of

materials available – and, importantly, affordable – to them, and the implications of those decisions upon the design itself. If the budget can only cover the cost of two-colour printing, for instance, then those restrictions need to be put in place in advance and then turned to the designer's advantage in seeking innovative responses to the range of techniques and materials available.

The Project Focus
Once the field of study has been defined and broadly analysed, the next stage in the design process is to specify a project focus (what will the specific context and function of the work be within the wider field of study already defined?) and research question (a refinement or redefinition of the original intention, or a hypothesis or proposition to test).
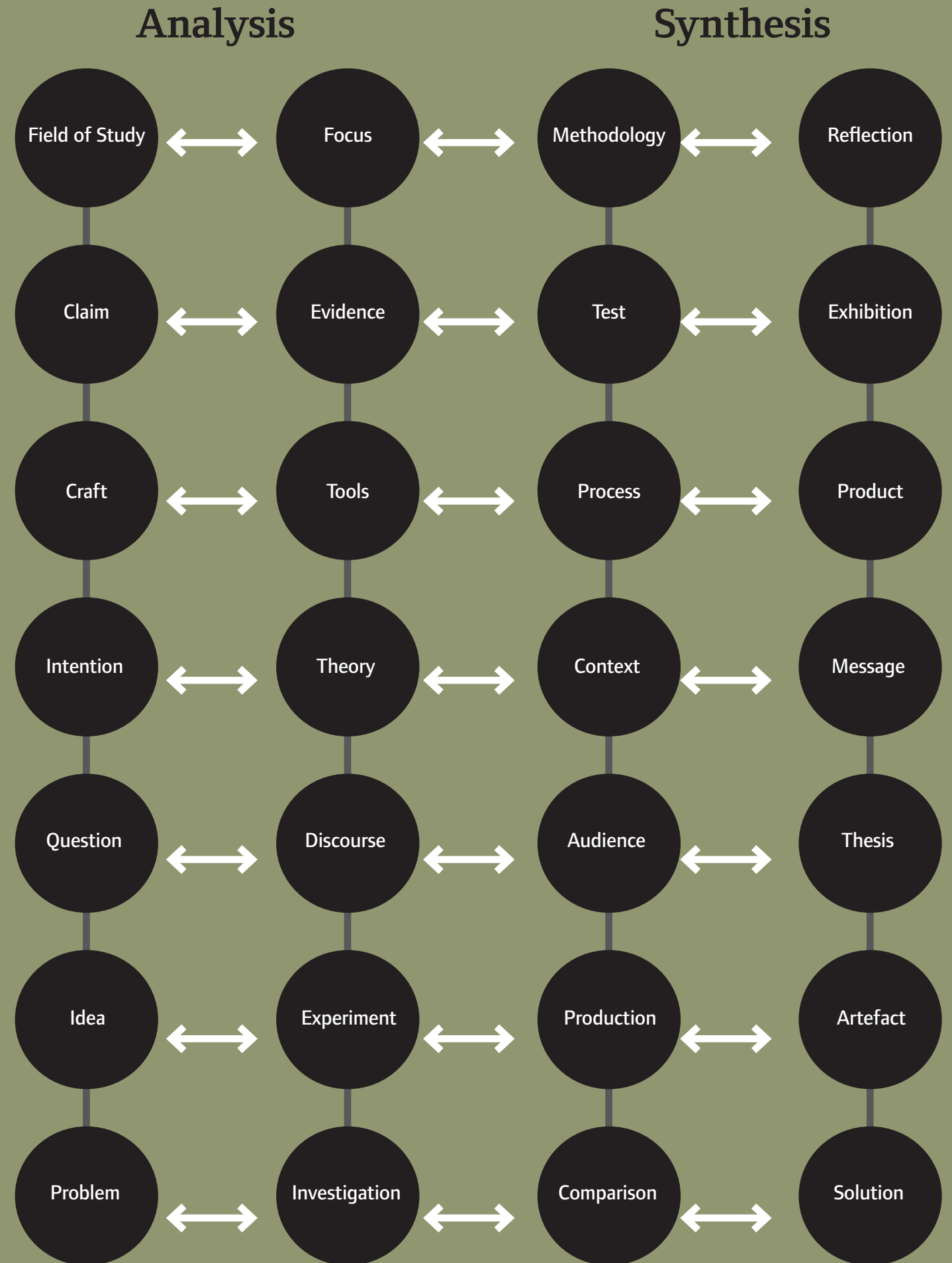
Topography
A detailed description of spatial configuration. The word could be employed to describe a process of mapping, documenting or recording, often with particular reference to what is occurring below the surface. Useful in graphic design research to describe an underlying approach to a project or a working method or process.

Typology
The study and interpretation of types – for instance, a person, thing or event that serves as an illustration or is symbolic or characteristic of something. The phrase also relates to the organization of types and their classification for the purposes of analysis.

Analysis   Synthesis

Field of Study ⟷ Focus ⟷ Methodology ⟷ Reflection

Claim ⟷ Evidence ⟷ Test ⟷ Exhibition

Craft ⟷ Tools ⟷ Process ⟷ Product

Intention ⟷ Theory ⟷ Context ⟷ Message

Question ⟷ Discourse ⟷ Audience ⟷ Thesis

Idea ⟷ Experiment ⟷ Production ⟷ Artefact

Problem ⟷ Investigation ⟷ Comparison ⟷ Solution

Research and Design

Once the designer has become familiar with the broader intentions of the brief, a specific project research question is needed to demarcate the exact intentions of the work to be undertaken. At this stage, the designer should be able to describe the message that is to be communicated to a specific audience, or within a specific context, and the aims and objectives of that communication. For instance, to persuade the receivers of the message to act in a particular way (e.g. buy this product, go to this event, turn left at the next junction), or to clearly communicate a particular emotion or identify with a subcultural group.

The focus and specific research question may change during the lifespan of a project, becoming broader and then being redefined in an ongoing process of critical reflection and reappraisal. There are a number of ways in which the narrowing down and refining of a project focus might take place. Two useful models for the designer to use in order to ascertain the context of their work and define a particular research question are set out diagrammatically on page 59.

The first research model, which we will term the 'context-definition' model, emphasizes the investigation of a field of study. In this model, the designer attempts to become more expert within the field of the brief and the project focus is defined in response to an identifiable need within that area. The second model, termed 'context-experiment', still requires the designer to undertake a broad preliminary analysis of the field of study, but the practical work on the brief itself begins earlier in the process. Usually this is done through a series of tests or experiments, which can be evaluated within the field of study, leading to a redefinition of the research question dependent on the results gathered. It is important here for the designer to not lose sight of the original project intentions, and to work through their experiments in a systematic way. The context experiment model will inevitably lead to a number of 'failed' experimental outcomes, as each small 'test' is an attempt to gain feedback in the definition of the project focus. In fact, if an experimental piece of visual communication is unsuccessful when tested with a target audience or in a specific context, then this should still be seen as a positive exercise in gathering information on the project focus and identifying directions with less potential for further development. By determining what does not work, as well as what potentially does, the designer is in a far better position to arrive at a more successful resolution.

A Plan of Action

Once the problem has been identified, the next step concerns the choice of appropriate research methods (how will the designer research and develop the project in response to the context and intention?). A research methodology is simply a set of self-imposed rules by which the designer will approach or engage with a project or brief. Once the intention of the work has been clearly stated, together with a detailed mapping of the field of study and the definition of a focus and research question, the designer needs to outline exactly how he or she intends to go about developing the project and testing ideas in order to create an effective solution to the brief – a plan of action.

The intention here is to develop systematic ways of working that lead progressively to a more successful outcome, based on experiments and visual testing, materials investigation and audience feedback, and the goal is to produce a piece of graphic design which is effective, useful or engaging.

Analysis
The stages of a graphic design project that involve the collection and collation of data and the analysis or interrogation of existing properties and conventions therein. There are many ways to describe this aspect of a design project, dependent on the specific area of the design profession within which the work is being undertaken. For instance, within an academic environment, where a project might be described as occupying the arena of pure research, the analytical stage of the project might be described as the broad investigation of a field of study and the further specification of a project focus.

In models of applied research, these terms could be supplanted with 'problem' and 'investigation' or 'idea' and 'experiment' – in each case, this stage of the project involves the gathering of background material and the establishment of the key themes and intentions of the brief.

Synthesis
Once a clear context and content of the design brief have been established, the designer is able to bring together secondary and contextual research findings with a range of experimental and practical methods of production in order to develop the final outcome or artefact. Again, these terms vary depending on the background of the project and the position of the designer, but 'synthesis' in each case implies the use of knowledge gained through research and the testing of alternative production methods in the planning and formation of creative and inventive design resolutions.

Analytical
Adjective relating to analysis
(n.) – the division of a physical or abstract whole into its constituent parts in order to examine their interrelationships.
The New Collins Dictionary and Thesaurus – HarperCollins (1992)

As a design method, this involves the designer becoming more familiar with the specific message or intention of the brief, the audience, appropriate visual language and the requirements of the client.

Propositional
Adjective relating to proposition
(n.) – a proposal for consideration, plan, method or suggestion.
The New Collins Dictionary and Thesaurus – HarperCollins (1992)

This usually takes the form of a hypothesis or what might be termed a qualified assumption, supported by some form of material evidence. Within graphic design, this means the definition and testing of a range of alternative potential solutions.

Design involves both aspects of research. Designers need to be aware of the context within which their work will be read, and the possibilities offered by audience familiarity, materials and budget constraints. The solution also needs to be innovative – offering a new way of presenting the information.

Different graphic design projects may involve each of these areas of research to a greater or lesser extent. The range and application of appropriate research methods is dependent on the brief or research question, the specific qualities of the message to be communicated, project budget and timescale, and the relationship between client, designer and audience.

Claim ←——————→ Evidence
Qualification

06 The Design Cycle >>
Central to any design research activity is the relationship between the viability of the research question and the methodology employed in the exploration of the subject under examination.

It is useful to consider this notion as if one was constructing an argument. The rhetorical aspect of graphic design is a central defining feature of the discipline. To create a successful argument, it is important to be explicit in two key factors; the **claim** that is being made by the person putting forward the argument, and the **evidence** that he or she provides to support their claim (the **qualification** of the validity of the argument).

The assertion – the claim that the designer is making – should be both substantive and contestable. The contention proposed should be supported by relevant and valid evidence. This evidence should be introduced in stages; in some cases it should be treated as if it were a sub-claim and may itself need to be supported by further evidence.

The qualification of the design proposal – the evidence to support the claim – helps to fulfil a number of requirements in a successful design. It can help substantiate the choices made by the designer when presenting the work to the client, give greater credence to the visual vocabulary adopted, and lead to a more thoroughly tested and therefore, probably, more successful outcome.

'Pure' information exists for the designer only in abstraction. As soon as he begins to give it concrete shape, to bring it within the range of experience, the process of rhetorical infiltration begins.

Gui Bonsiepe
Visual/Verbal Rhetoric – Ulm 14/15/16 (1965)