

The background is a dark blue gradient with a subtle pattern of white dots. On the left side, there are several overlapping circular elements. A prominent one is a large circle with a scale around its perimeter, marked with numbers from 140 to 260 in increments of 10. Other circles are partially visible, some with dashed lines and arrows, suggesting a design or engineering theme.

GRAND DESIGNS

DESIGN THINKING IN GAMES

GRAPHIC DESIGN

TOM FISHER - IMAGINETIC

BY DESIGN: RULES VS. EXPERIENCE

Rules

The science of game design

How the game is played

Physics
Modeling
Action – Effect
Simulation

Experience

The art of game design

What the player feels

Psychology
Communication
Suspension of disbelief
Engagement

THE GAME DESIGNER CREATES AN IMAGINARY EXPERIENCE

Jesse Schell

The Art of Game Design (2008)

- Game \neq Experience
- Game \supset Experience
- Players and game are real,
the experience is *imaginary*



SHAPING THE GAME EXPERIENCE

Video Games



Bioshock

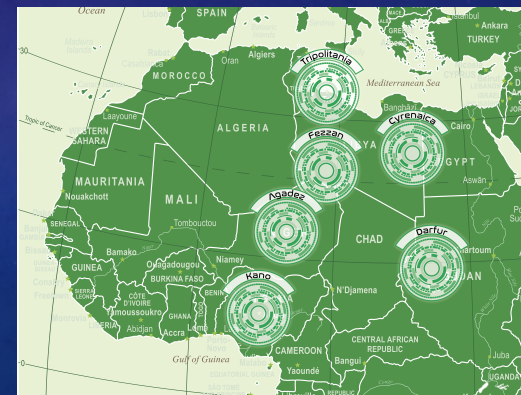
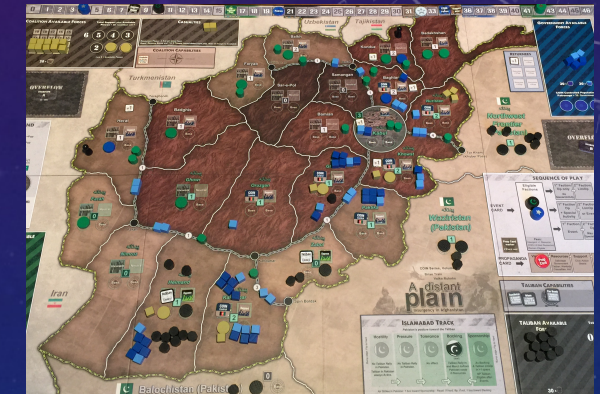
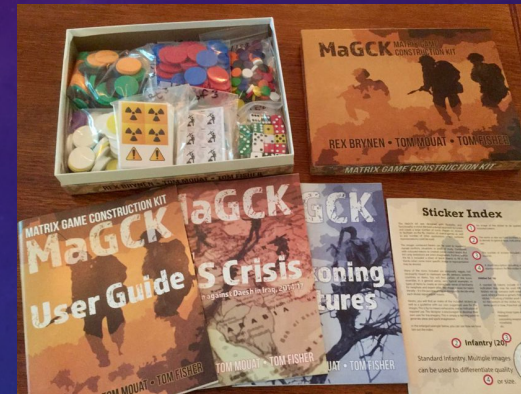
Physical Games



Tomorrow

ELEMENTS THAT SHAPE PHYSICAL GAMES' EXPERIENCE

- Rules (invisible in many video games)
 - Keep the rules out of the way
- Methods
 - Application of rules
 - Role of chance
- Facilitation
- Materials
 - Components
 - Supporting Materials
 - Multimedia



SHAPING THE VISUAL EXPERIENCE

THE ART AND SCIENCE OF GRAPHIC DESIGN

- **Norman's 3 Levels of Design (Experience)**

- Visceral
- Behavioral
- Reflective



VISCERAL DESIGN

- Appearance driven
 - Shape
 - Colour
 - Style
- Attitudes
- Beliefs
- Feelings
- Entirely Imaginary Construct

1 Connections North

2 Connections North

3 **CONNECTIONS NORTH**

4 Connections North

PERCEPTION IMPACTS THE EXPERIENCE



BEHAVIORAL DESIGN

- Usability
 - Pleasure derived from use
 - Effectiveness of use
- Ease of finding information
 - Reference
- Ease of play

REQUIREMENT



Special efforts are needed to assure that emergency water and sanitation facilities offer adequate privacy and are safe and accessible for women and girls.

CH-107

Safe Water and Sanitation Initiative

Any one player may assign a **team** to this card during their **Human Resource Phase**. This card also requires one **WASH supply** from **any** player.

SUCCESS For each **player** participating in the **WASH cluster** place one **WASH supply** in any district.
Discard this card.

FAILURE Women and girls are reluctant to use unsafe lavatories and wash facilities.
Lose 1 RP and discard this card.

REFLECTIVE DESIGN

- Rationalization of the experience
- Intellectual effect of the experience
- Desirability
- Mediates the behavioral level of design
 - Bad physical design can be very difficult to overcome

The background features a dark blue gradient with a subtle pattern of white stars and technical diagrams. On the right side, there are several circular diagrams resembling gauges or dials with numerical scales (0, 80, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210) and arrows. Some diagrams have dashed lines and solid lines, suggesting different states or paths. The overall aesthetic is clean, modern, and technical.

TAKEAWAYS:

THREE BASIC PRINCIPLES TO APPLY TO
PHYSICAL GAME DESIGN

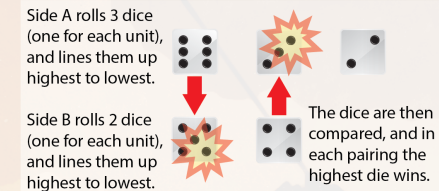
OCCAM'S RAZOR

- The simplest solution is almost always the best
- A design isn't finished when there is nothing more to add, but when there is nothing left to take away.
 - If an element is to be included it should have a specific purpose.
 - Theme
 - Mood
 - Reinforcement

DUAL-CODING

- The brain process visual information 60 000 X faster than text
- Text reinforces imagery, helping the brain absorb and remember information
- It is easier to process information accompanied by visual cues

example, if A had rolled three 6s).



Example 7

Depending on the game, combat may consist of one round of **SCRUD** or several (usually two or three). This should be known by players in advance, based on the time-scale of the game and the speed with which combat might produce a clear outcome. Alternatively, players might also be given the option of announcing their intended tempo of operations, and the number of rounds of **SCRUD** determined by this: two cautious forces skirmishing might involve a single round of combat, while more aggressive engagement on both sides might involve three rounds.

If multiple rounds are used, players can also be given the option of discontinuing combat and retreating after the first round, although only if withdrawal seems plausible given the situation. In this way, a more mobile scouting force might be able to easily disengage from a slower enemy, while a mechanized assault with artillery support against infantry would tend to pin the enemy in position, making withdrawal difficult.

In many matrix games, forces may not be evenly matched but rather be of differing qualities and combat capabilities:



Example 8

older aircraft might face 5th generation fighters, or elite special forces go up against local militias. In such cases, the initial die rolls can be modified by the troop quality. *A Reckoning of Vultures*, for example, recognizes four different qualities of troops, with die roll modifiers ranging from +1 (elite forces, armour) through 0 (regular infantry), -1 (police, militias) and -2 (protesters). In such cases, the dice are rolled as above, but each die is immediately modified to reflect its quality. In such cases, it is convenient to use dice of different colours to denote different levels of bonus:

- **black +2**
- **green +1**
- **white 0**
- **yellow -1**
- **red -2**

Mats provided with *MaGCK* summarize these modifiers, and can be placed in easy view on the map or table.



Let us say, for example, that four groups of National Union of Toilers protesters are trying to defeat government infantry and elite Presidential Guard outside the Presidential Palace. There are more of the protesters, but they lack the weapons and training of the military (Example #8).

The result is that the protesters suffer a **major defeat**: In this case, placards and proletarian zeal could not compete with the brutality, bullets, and bayonets of the dictatorship. If NUT wishes to defeat the military in open confrontation,



1



ISR

Overhead intel:

Each Coalition Sweep Op,
Coalition may Activate another
3 Guerrillas in any 1 space.

COALITION CAPABILITIES

Competition for targeting assets:

Air Strike may not
accompany Sweep.



27



Tehrik-i-Taliban Pakistan

TTP attack in Pakistan:

Shift Islamabad 2 boxes
toward Hostility.

TTP support Quetta Shura:

Taliban place 2 pieces in or adjacent to
Pakistan and add +3 Resources.



51



Karzai

President taps cousins:


+1 Patronage per space at Support.

President deals to keep office:

Transfer 2 die rolls of Patronage
to Warlord Resources.

MENTAL MODELS

- Easier for a user to understand something if they can model it off something they already understand



UNCLASSIFIED

HADR-TF Briefing

AFTERSHOCK Emergency Briefing

HADR-TF


At dawn today a powerful earthquake struck Galasi, the capital city of Carana, causing widespread destruction of homes and infrastructure. Tens of thousands of people are in need of urgent aid and medical attention. At the request of the Caranan government, military forces from several friendly countries have formed the Humanitarian Assistance and Disaster Relief Task Force, or HADR-TF, and are en route to assist. The United Nations and local and international NGOs are also responding.

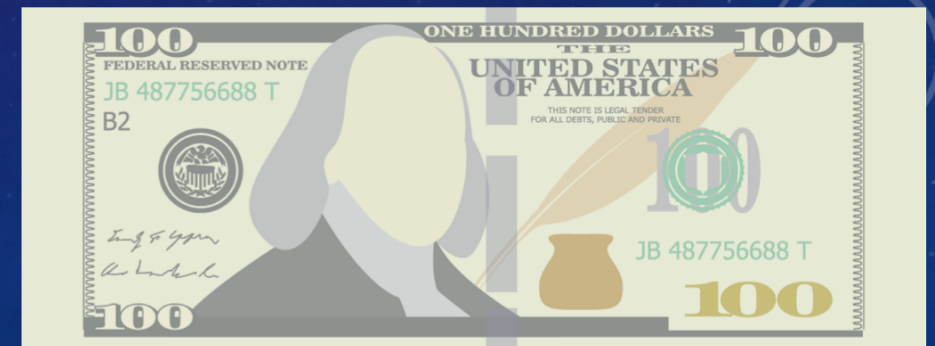
Our top priority is to provide assistance to those in need. Carana has suffered from violent internal political unrest in the past. In the longer term it is important that mission not become an open-ended commitment, and so appropriate draw-down of the Task Force should be undertaken as Carana moves from the emergency stage to longer-term recovery.

Turn	Teams	Supplies	SPECIAL RULES:
Initial Capabilities	NONE	NONE	During the Supply Phase, any two new supplies may be exchanged for one logistics infrastructure.
Days 1-2	+2	+4	Any number of teams may be assigned to security. Security operations cost 1 OP.
Days 3-4	+2	+5	
Days 5-7	+1	+6	May not conduct needs assessment.
Week 2	none	+6	
Weeks 3-4	none	+5	Additional teams may be withdrawn in the human resource phase for -1 OP each. One team may be withdrawn per turn.
Weeks 5-7	remove 1	+4	
Weeks 8-12	remove 1	+2	One OP may be spent to gain 2 additional supplies, or 2 OP spent to gain 1 additional team.

END OF GAME ADJUSTMENTS:

- Lose 1 OP for each HADR-TF team in play beyond first
- Gain 1 OP bonus for every 5 RP end-of-game score





SUMMARY

- The game experience is an entirely imaginary construct, separate, but deriving, from the game.
- Visceral response is automatic and subconscious
- Behavioral response is affected by ease and pleasure of use
- Very difficult to attain a positive reflective response if visceral and behavioral are negative

3 Non-graphic designer takeaway tools

- Occam's Razor
 - KISS principle
 - All elements should have a purpose
- Dual-Coding
 - Reinforce text with images
- Mental models
 - Make it familiar