

Dynamic Process Tracing Environment (DPTE)

v. 3.0 Documentation

This documentation is divided into three sections.

Section One is a general introduction to the software and how it is meant to be used, with an explanation of Dynamic Process Tracing (Part A), the Terms and Concepts used in DPTE (Part B), a step-by-step outline for Experiment creation (Part C), a guide for running experiments and obtaining results (D), a new-features list (E), and a list of DPTE System Variables (F).

Section Two contains a detailed look at each screen in the DPTE Researcher interface. A graphic of each screen is labeled with notes about each control or field that can be manipulated.

Section Three covers the Social Experiment capabilities of DPTE. An understanding of the concepts in Sections One and Two is assumed.

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Section One

Theory/Concepts and Usage of DPTE Software

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Section One Part A: Dynamic Process Tracing using DPTE

What is Dynamic Process Tracing?

Dynamic Process Tracing is a technique for studying decision making; it can be used to study any decision making task that revolves around information that changes over time, and can be used to study multi-stage, multi-alternative evaluation and choice environments.

Dynamic Process Tracing (DPT) is most easily described in the context of studying a political campaign. While many types of decision-making can be understood using simpler techniques, a political campaign is inherently dynamic: it unfolds over time with information coming and going during its course. Gaining a fuller understanding of how voters obtain, process, and evaluate the information they encounter requires an approach that allows us to study those voters over time.

Static methods of information presentation are not adequate for this purpose. Elections do not proceed in an ordered fashion, with complete information always available for examination. In a real election, information comes and goes, is much less organized, and the time allowed for learning and information gathering is limited. Candidates do not always make it easy for voters to make an objective comparison or even get a clear understanding of where they stand on issues. Much information in many social environments (e.g., television advertisements) arrives without any active effort by the decision maker to learn that information. Decision makers may be overwhelmed by far more information than they can possibly process.

DPT simulates this more "chaotic" mode of presentation by having information scroll down a computer screen rather than remaining fixed in place. The user sees labels corresponding to a candidate, and a small amount of information roughly equal to a newspaper headline. Only a limited number of these labels are visible on the computer screen at any one time. The rate of scrolling is such that people can read two or three labels before the position changes.

Subjects access information behind the label by clicking on it using the mouse. The scrolling continues in the background while the detailed information is read, however, creating a "cost" in terms of missed information, mimicking the dynamic nature of election information flow. This scrolling format makes the task of processing campaign information much less manageable for the subject. In addition, the relative likelihood of any particular piece of information becoming available is controlled, so that some information (e.g., party identification) is much easier to obtain (i.e., appears much more often) than other types of information (such as detailed policy positions). Finally, at periodic intervals the computer screen is taken over by a political advertisement for one of the candidates, providing all voters with a fair amount of "free" information they did not actively choose to learn. All of these features make DPT a much better experimental analog to a political campaign—or to any dynamic social situation.

What is the Dynamic Process Tracing Environment (DPTE)?

The Dynamic Process Tracing Environment (DPTE) is a web-based system that allows any researcher interested in examining decision making over time to make use of the Dynamic Process Tracing methodology. DPTE makes it relatively easy to accomplish a set of standard experimental tasks, allowing researchers to devise additional manipulations to study dynamic decision processes.

DPTE consists of two main subcomponents, the Researcher Interface and the End User Interface (called the "Player" because it "plays" the Experiment). There is also additional stored data as a result of running an Experiment, called the Experiment Results.

The **Researcher Interface** (often simply referred to as 'DPTE') is where a researcher can assemble or create an Experiment. The Researcher Interface contains over a dozen separate screens with fields and controls that allow the researcher to create and enter information that, taken together, describes an Experiment. All of this data is automatically stored in a database and retrieved as needed for creating and editing Experiments.

The **DPTE Player** ("Player") is the environment in which an Experiment is executed; in other words, it is where the subjects view and interact with the Experiment as it displays the data that the researcher entered in the prescribed manner.

The term **Experiment Results** refers to the data generated from the execution of an Experiment. Whenever an Experiment is run by a Subject, data is generated that includes a variety of information about the Subject, what the Subject saw and clicked on during the Experiment, answers to Questions asked of the Subject, and other status information, broadly divided into two areas: Recorded Events and Subject Variables. These are covered in Part D, along with the Rectangular Data Set, which is a restructuring of the Experiment Results into a particular format for use with data analysis packages.

Learning More About DPTE

Section One **Part B** (following) describes all of the component parts of an Experiment, by defining and discussing the terms used in DPTE. **Part C** demonstrates the method of Experiment creation, via a diagram that shows the necessary steps in order, and **Part D** explains how to run an Experiment and how to access the stored results. There is also a summary of features new to DPTE 2.0 (**Part E**), an explanation and list of DPTE's "Subject Variables" (**Part F**), and an Index of terms at the end of Section One.

Section Two describes the Researcher Interface screen by screen, and also contains more information about the Player. **Section Three** covers DPTE's Social features, which are optional features used to allow and/or simulate social interaction in DPTE.

Section One Part B: Explanation of DPTE Terms

DPTE uses many terms that should be understood by a researcher who is attempting to create an Experiment. These terms are "generic" in that they are not specific to a political campaign-type of Experiment. Because a political campaign is easy to understand, that will be the motif used to define the terms, though other examples will be used occasionally. These terms are defined in the order in which they are best approached, as many are pre-requisites for understanding subsequent terms.

Researcher - the Researcher is anyone who has a DPTE account and is interested in creating Experiments or being able to view their inner workings to see how a particular Experiment is defined. An Experiment can have several associated Researchers. One Researcher is the Owner of the Experiment; all others are either Co-Investigators or Participants.

Owner - This Researcher "owns" the Experiment, and is the only one who can delete, rename, or duplicate the Experiment.

Co-Investigator - Less powerful than the Owner, the Co-Investigator can still modify essentially everything in the Experiment except the name and passphrase, but cannot delete the Experiment.

Participant - This Researcher can view the entire Experiment but cannot change anything.

The Researcher Interface contains a section of personal data about a Researcher that s/he can see, on the same screen as the Experiment Setup (see Section Two)

Subject - This refers to a person who is viewing or "taking" an Experiment in the Player. When a Subject begins an Experiment, data is stored in the database about what that person sees and the actions they take. This is covered in greater detail in Part D, Running an Experiment and Accessing Results.

Experiment - The Experiment is the DPTE representation of an experiment, encompassing all the data needed to instruct the DPTE Player on what to display and how to display it. An Experiment will contain Alternatives, Attributes, Groups, Stages, and so forth. An Experiment is "owned" by a Researcher (the Owner), and other Researchers may be able to view and/or change the Experiment's data (see Co-Investigator and Participant).

All of the terms described below refer to objects that are defined within an Experiment.

Alternative - An Alternative refers to anything that a Subject is trying to decide upon in the process of making a decision. In the campaign metaphor, an Alternative is a candidate, with each candidate in an election represented by a distinct Alternative. In a different type of Experiment the Alternative might be a product that the Subject receives information about, in order to choose among several products. An Experiment might have two Alternatives or hundreds; there might only be one Alternative if evaluation is the goal rather than choice. A typical political campaign might consist of two Alternatives for a Presidential election, or perhaps as many as ten for a primary election.

The data for an Alternative consists of a name (long and short versions), gender (which can be neuter in the case where the Alternative is not a person, or is unimportant), and description. Each Alternative can have an Association (see below). An Alternative can also have a Category, which is any tag the Researcher wants to assign to it for further use in grouping Alternatives in some manner.

Association - An Association is a cohort to which the Alternative belongs. In the campaign metaphor where the Alternative is a candidate, the Association is the candidate's party affiliation.

In addition to a unique name (e.g. Democrat, Republican), each Association can have a color and a small graphic symbol to represent the Association. For example, in the campaign metaphor there may be an Association named "Republican" with red for the color and an elephant for the symbol.

Attribute - An Attribute is any aspect of the Alternative which helps differentiate between Alternatives, or any data about the Alternative which could be useful to know. For the campaign metaphor, an Attribute may be an issue such as "gun control" or "defense spending," or a personal characteristic. For the product metaphor, an Attribute might be "price" or "reliability." In each case, a given Alternative may have a different "score" for each Attribute. This score is called a Rating in DPTE (see below). Like an Alternative, an Attribute can have a Category assigned to it by the Researcher, and the Attribute also can have a Subcategory. These are simply tags that can be used by the Researcher for his/her own tracking or grouping purposes.

Rating – For any given Alternative, the Researcher assigns a Rating to each Attribute of that Alternative. In an election between two Alternatives, Barack Obama and John McCain, each would have a Rating for "gun control" and another for "defense spending." The numeric Rating would be representative of the candidate's position on the issue (Attribute).

Rating (cont.) Rating values range from 0.0 to 7.0; normally in the political metaphor, 1.0 represents a far "left" or liberal stance on an issue (Attribute), and 7.0 is far "right" or conservative. The Rating, however, can mean whatever the Researcher wants it to mean; it is simply a scale that is used to differentiate between Attributes of different Alternatives. To make use of a 1-10 scale instead of 1 to 7, simply use 0.1 to 1.0 as the range of Ratings. Ratings for Alternatives and Attributes can be accessed on both the Alternatives and Attributes page. On the Attributes page of the Researcher Interface, the Information Board of Default Ratings can be accessed; it displays the Alternative/Attribute Ratings as a matrix.

Stimulus Items (see Stimulus Items) also have a Rating, and these Ratings are used to link ("Assign") Stimulus Items to an Alternative, using a comparison between their Ratings. For Alternatives, a Rating of 0.0 is a special case: an Alternative with a 0.0 rating for a given Attribute will never be assigned as the Alternative for an Auto-Assigned Stimulus Item for that specific Attribute. See Stimulus Items, and Congruency (within the section on Group) for more information and explanation.

Stage - A Stage is the largest "section" of an Experiment, consisting of one or more Sub-stages. Experiments are designed around Stages and Sub-stages, with most data residing at the Sub-stage level. An Experiment must have at least one Stage containing at least one Sub-stage. The Player presents the Experiment to Subjects beginning with the first Sub-stage of the first Stage and continues in order to the last Sub-stage of the last Stage.

For example, in the election metaphor there might be a "Primary" stage, and a "General election" stage, that are presented in order. The main function of a Stage is that it contains Sub-stages; it is mostly an organizational aid, meant to divide an Experiment into understandable and logical sections. Each Stage has a duration, a time value that is calculated by summing the durations of each of its Sub-stages.

The only important data associated with a Stage is that each Stage can have a different set of relevant Alternatives, for each given Group (see Group for more information). Showing or hiding the "Time Remaining" to the Subject is also controlled at the Stage level.

Sub-stage - A Sub-stage is, as the name implies, a subdivision of a Stage. In DPTE, a Sub-stage is where actual content is contained, in the form of various Items that are presented to the Subject.

A Sub-stage consists of three subdivisions: the Before Phase, the Flow Phase, and After Phase. In the Before and After Phases, the DPTE clock does not run. The clock can run only during the Flow Phase. There need not be content in all three Phases of a Sub-stage; often only the Flow Phase is used.

Each Phase (Before, Flow, and After) of a Sub-stage is handled differently by the Player:

Before Phase: This is the period of time after the previous Sub-stage is over and the new Sub-stage is beginning. During this time the clock is stopped, and any Before Items that are part of the Sub-stage (for the current Group; see Group) are presented in order. See also: Before Items.

Flow Phase: During this period of time, Flow Items that have been added to the Sub-stage (and current Group) are presented, in the form of "flow panels" that descend down the screen; the Subject can click on the panels to see the content of the Flow Item. The DPTE clock runs during this time, and every N seconds (determined by Pace—see Pace) one or more flow panels are added from the top of the screen and a corresponding amount scroll off the bottom of the screen.

In addition to Flow Items, Timed Items may be presented in the Flow Phase. Unlike Flow Items, Timed Items are not presented as panels and clicked on, but simply appear at the designated time. See Flow Items and Timed Items under Stage.

Also, the Flow Phase is the only Phase in which Branch Buttons can be used (see Branches). They are utilized only as Timed Items.

The Flow Phase of the Sub-stage lasts as long as the Sub-stage's Researchre-defined Duration, when possible. The end of the Flow Phase is handled as follows:

- If all the Flow Items have scrolled off the screen, even if there is still time on the clock, the Flow Phase ends.
- If the clock runs down to zero and there are still Flow Items scrolling on the screen, the Flow Phase ends and all of the remaining Flow Items disappear.

In other words, the Flow Phase ends when the clock counts down to zero OR all of the Flow Items have scrolled off the screen, with the following exceptions:

- If all the Flow Items have scrolled off the screen, but there are Timed Items defined to appear at a later time, then the Flow Phase will continue (with no Flow Items scrolling) until the Timed Item appears.
- The Flow Phase cannot end if a Flow Item or Timed Item is currently open. Once all opened Flow Items and Timed Items are closed, then the rules above apply.

See Stimulus Items, Flow Items and Timed Items for more information.

After Phase: The After phrase complements the Before Phase, but is executed after the Flow Phase of the Sub-stage is completed. Flow Items and Timed Items are not presented in this Phase; only After Items that have been added to the Sub-stage/Group combo are presented. A Sub-stage is not finished until the After Phase is completed, and a Stage is not completed until the After Phase of the last Sub-stage has completed.

Group - A Group represents a cohort with which a Subject is identified. Groups are also a basic building block of the Experiment, along with Stages and Sub-stages. Depending on which Group a Subject is placed into, the Subject might have a completely different experience in an Experiment, because the contents of a Sub-stage can be completely different for each Group. A Group is like a "track" that determines the content the Subject sees within a given Sub-stage. Groups can also be defined as a means to skip particular Stages or Sub-stages using the branching capability described later (see Branch).

A good example for Groups uses the political campaign metaphor. A researcher might want an Experiment that takes a Subject through a Primary campaign, and then a General Election campaign. S/he might then create a Stage called "Campaign" with Sub-stages called "Primary" and "General Election."

The researcher wants Subjects who lean toward being Democrats to participate in the Democratic primary, and those who are more Republican to see content relevant to the Republican primary. To solve this, two Groups are created: "Leans Republican" and "Leans Democratic."

Within the "Primary" Sub-stage, Stimulus Items with content about the Republican candidates are added to the "Leans Republican" Group, and Democratic candidate content is added to the "Leans Democratic" Group.

Using a Questionnaire in a Stage before the "Primary" Stage (or in an initial Sub-stage in the "Primary" Stage), the Subject is asked for their self-identified affiliation (or perhaps they answer some questions that determine their closest affiliation); then, using a Branch, they are transferred into the correct Group. The Subject will then see the appropriate content for the Group they were placed in.

Note that in the example above, another way to handle Groups is to alter the Group itself, using Conditions to determine the Alternatives available in the Group and the Items presented to the user. For the simple example above it may be easier to just create two Groups, but you can see that as the number of "variables" you want to play with increases, the amount of Groups needed is multiplied, and the use of Conditions becomes a better choice; see Conditions.

Group (cont.) Groups contain little data of their own, other than the Group name and description. However, Groups are "joined" with Sub-stages to contain all Item content (Stimulus Items, Questionnaires, etc.) presented in an Experiment, and Group-Stage pairings determine which Alternatives are available for Auto-Assigned Stimulus Items.

In addition, Pace, Portion, and Congruency are defined separately for each Sub-stage-Group pairing:

Pace - the Pace at which Flow Items should move on the screen, represented in seconds. If the Pace is 3, then Flow Items will scroll every three seconds. The upper limit is 900, which is very slow (every 15 minutes).

Portion - The number of new Flow Items that are added each Pace move. Normally a value of 1 is used—1 new item scrolls onto the screen as 1 item scrolls off the bottom—but values up to 6 are allowed. Using a value of 6, the entire screen is replaced with new Flow Items at each Pace scroll; a value of 3 replaces half the Items.

Congruency – This defines the percentage of Auto-Assigned Stimulus Items that will be Assigned by finding the Alternative that comes *closest* to matching the Stimulus Item's Rating. The rest of these Stimulus Items will be Assigned by finding the Alternative whose Rating is *farthest* from the Stimulus Item's Rating. The latter are termed *incongruent*.

In other words, if Congruency is set to 100%, then Stimulus Items marked to be Auto-Assigned will be matched to their closest Alternative, by Rating (unless the Alternative Rating for the Attribute is 0.0, which disqualifies that Alternative). If Congruency is set to 0%, then they will be matched to their least similar Alternative (by Rating). There are some other exceptions; see Stimulus Item for more information on Auto-Assigning.

Group Subject Assignment: When the Experiment begins, the Subject will be put into the Group specified by a parameter in the URL, if passed (see Part D: Running An Experiment and Accessing Results); otherwise the Group will be randomly selected using the percentages specified by the Researcher. The percentage likelihood that a given Group will be selected is designated on the Groups screen in the Researcher Interface.

Item - Item is the encompassing term for the objects which contain content and/or perform actions in a DPTE Experiment. An Item can be a Stimulus Item, a Questionnaire, an Announcement, a Branch, or a Calculation.

Stimulus Item - A Stimulus Item contains content that can be presented to the Subject. For example, in a political campaign Experiment, Stimulus Items might present campaign slogans, candidate ads, or newspaper headlines to the Subject.

There are four types of Stimulus Items: Text Items, Image Items, Video Items, and Ticker Items. All Stimulus Items can be used as Timed Items; the first three types can also be used as Flow Items.

Text Item - A Text Item contains text that the Subject reads to gain information about an Alternative. It may be a statement about a candidate's position on an issue, a reviewer's review of a product, or any other text-based information. HTML can be used; see Using HTML in Text Fields in Part E.

Image Item - An Image Item contains a graphic image relevant to the Experiment. It might be a picture of a candidate or a product, for example.

Video Item - This is similar to the Image Item except that the content is a video. The Video Item is the only Stimulus Item that closes itself; the video starts automatically, and when the video is finished, the Video Item disappears.

Ticker Item - A Ticker Item is used to impart a small amount of textual information to the Subject. The Ticker has two forms: in the first, a short sentence appears centered at the top of the Player screen and fades away after a specified amount of time. In the second, called "Ticker Tape," the sentence or message scrolls horizontally along the upper part of the Player screen and scrolls off the edge, moving from right to left. The Ticker Item is only used as a Timed Item.

Every Stimulus Item, regardless of type, has a Headline and a Synopsis. The Headline, as the name implies, is a very short phrase that imparts the main idea of the Stimulus Item's content. The Synopsis consists of a few sentences to summarize the content briefly. The Headline is always shown in the Player when a Stimulus Item is used as a Flow Item, while display of the synopsis is the default but is optional. Each Stimulus Item can be tagged with a Category, which is used for grouping purposes or any other reason; Categories do not affect the display of a Stimulus Item.

Stimulus Item (cont.) - In addition, every Stimulus Item has a corresponding Attribute parameter and an Alternative parameter.

A Stimulus Item's Attribute can be Specific, that is, specifically assigned to any Attribute in the Experiment. For example, if a Text Item contains a discourse on health care, and there is an Attribute called "Health Care," then the Text Item's Attribute parameter should be set to "Health Care." When the Subject clicks on that Flow Item, the software will know that the Subject was perhaps interested in the "Health Care" issue.

A Stimulus Item does not always refer to a specific Attribute; in this case the Attribute parameter is set to General/None. An example of this would be a Text Item that showed poll results in a race with many candidates. This Item has no "issue" associated with it.

The other important parameter is the Alternative parameter. As with the Attribute this parameter can be explicitly specified or set to General/None. If a Video Item, for example, is about Barack Obama, then the Alternative parameter would be set to the Alternative "Barack Obama." If the video isn't about any candidate in particular, it would be "General/None."

There is a third option, however, that is very important in DPTE, and that is the concept of allowing the software to Auto-Assign an Alternative for a Stimulus Item.

Auto-Assigned - A Stimulus Item may contain content (usually text content) that is not specific to an Alternative, but neither is it meant to be General content. As an example, a Text Stimulus Item may contain an unnamed candidate's position on Health Care. It isn't "general" content because it is a candidate's position, but no candidate is specified in the text. Instead, the Stimulus Item is meant to be Auto-Assigned using the Item's Rating and the Ratings of the available Alternatives as a guide. Depending on the Congruency setting for the particular Sub-stage/Group, the software either chooses an Alternative whose Rating on Health Care is closest to the Item's Rating on the same issue, or farthest from it.

Consider the example of a Stimulus Item with an Attribute of "Health Care" with a rating of 7.0. If the Congruency is 100%, the software will try to select an Alternative with a Rating close to 7.0 for the Attribute "Health Care." It will then "assign" that Alternative to the Stimulus Item. Assignments are made anew each Sub-stage, limited by the Alternatives available for a particular Stage and Group.

Auto-Assigned (cont.) - There are two special cases in which assignments that normally would be made are not:

1) Rating of Zero - If an Alternative has a Rating of 0.0 for an Attribute, it will never be the assigned Alternative for any Stimulus Item for that Attribute, even if its value is closest to (or farthest from) that of the Stimulus Item. A rating of zero is a special case, telling DPTE to not consider that Alternative as a possibility.

2) The "Bus Seat" Rule - Alternatives will always follow the "Bus Seat" rule when being assigned, that is, no Alternative will be assigned to a second Stimulus Item until each Alternative has been assigned at least once. In other words, if there are 10 Stimulus Items, each with a Rating of 1.0, and two Alternatives (with Ratings of 1.0 and 5.0 for the particular Attribute), and 100% Congruency, the first assignment would be made to the matching Alternative (1.0), the second will be made to the other Alternative (5.0), and the rest will be made to the matching one. If not for the Bus Seat rule, all would be assigned to the matching one since all of the Stimulus Items had Ratings of 1.0.

Note that if several Alternatives share the same Rating for an Attribute, the software will randomly choose one among them.

Tags - When a Researcher composes the text of an Auto-Assigned Stimulus Item it isn't possible to know the name of the Alternative that will be assigned, nor the gender, for example. To provide the ability to use such words as "he" and "she" and allow the use of a candidate's name, for example, certain "tags" are available for use by the Researcher. When assignment occurs, the software also resolves these tags as in the list below:

<u>Tag</u>	<u>Resolves to</u>
[[alt]]	Alternative's Distinct Name
[[alt_s]]	Alternative's Short Name
[[prn]]	he / she / it
[[prn_o]]	him / her / it
[[prn_p]]	his / hers / its
[[prn_r]]	himself / herself
[[prn_a]]	his / her / its
[[assoc]]	Association's Distinct Name

Tags (cont.) - A space followed by 'c' can be added to any tag name (within the brackets) to insure that it is capitalized. These tags typically used at the beginning of a sentence. For example:

<u>Tag</u>	<u>Resolves to</u>
[[prn]]	he / she / it
[[prn c]]	He / She / It

Note: Tags are designed for use with Auto-Assigned Stimulus Items, since the Alternative is unknown at authoring time. But tags can be used even when the Alternative is Specific. Normally, if the Researcher knows who or what the Stimulus Item is discussing the use of tags is unnecessary, as the names and pronouns are known. But using tags for specified Alternatives allows a Stimulus Item to be changed easily from Auto-Assigned to Specific and back without having to add and remove the tags. It also allows for more re-purposing of Stimulus Items that are written generically.

Tag replacement occurs in the main text (Item Text) of a Text Item and in the Headline and Synopsis of all Stimulus Items.

Questionnaire - This item type presents a Questionnaire to the Subject, with a variety of question types available. Each Questionnaire consists of an optional introduction page followed by any number of Questions, which can be presented sequentially or in a random order.

IMPORTANT: If a Questionnaire is presented twice in an Experiment, the later answers will **OVERWRITE** the former responses. This is because the answers are stored as Subject Variables and are not written to the database until the end of the Experiment. For Questions, the Subject Variable generated is of the form

questionnaireName.questionName

and holds a single value. If you need to have a Subject repeat a Questionnaire you should make a different Questionnaire with the same Questions, and these results will be stored separately. The Duplicate Questionnaire feature will make an exact copy of a Questionnaire, containing the same Questions as the original but having a different name.

Adding a Question to a Questionnaire does not necessarily mean that Question will be presented. If a Condition is used, the evaluation of that Condition (true or false) will determine whether the Question is presented or not. Conditions are optional and don't have to be used, but can make Questionnaires more flexible. See Conditions.

Question - One Question is presented per screen in DPTE. A Questionnaire can be configured to show a "Skip" button on each Question in order to make skipping Questions easier; if that option is not used, the Subject can still skip questions by providing no response, at which time a dialog will warn them that they are about to skip a Question. There is no way in DPTE to force a Subject to provide an answer to a Question, though Branches can be used to keep looping to a Questionnaire until a certain Question has been answered satisfactorily.

All Questions have a prompt, a field of text that contains the actual "question" or instructions on what to choose. The prompt text can use different font sizes and colors, and Subject Variables embedded in the text are resolved in the text. Each question can optionally display an image or a video above the prompt.

A Subject's responses are stored as text or numeric values, depending on the type of Question; a few Question types can be designated to specifically contain either Text or Numeric data. Every Subject response to a Question is stored as a unique Subject Variable which can be referenced later in Branches, Calculations, and Conditions.

A Question can be of any of the following types: Fill In The Blank, Free Text, Multiple Answer, Multiple Choice, or Slider.

Fill In The Blank: This presents a simple blank text field in which the Subject types a response to the text prompt. The Format of the answer can be Numeric or Text. If Numeric, only numeric answers are allowed (digits 0 to 9, decimal point and minus sign), and minimum and maximum allowed values can be specified as can decimal precision. For Text entries, the minimum and maximum number of characters in the response can be specified.

Free Text: Presents a larger blank text field into which the Subject enters a response. A minimum and maximum number of characters can be specified. The upper storage limit of the Free Text field is 9,999 characters.

Multiple Answer: Presents to the Subject any number of choices in text form from which the Subject may choose one or more answers. Check boxes are used on this question type, and the order of answers can be randomized. This type differs slightly from Multiple Choice which allows only a single answer selection.

Multiple Choice: Like Multiple Answer except that only one selection is allowed. Radio buttons are used on this question type, and the order of answers can be randomized. A Question of this type can be designated to store the response in Text format or Numeric format. If Numeric format is used, each Possible Answer can be given a numeric value, and this value is stored in the database instead of the text of the Possible Answer. The Subject sees only the text responses, not the numeric value, unless that value is also used as the text value of the Possible Answer.

Slider: The Slider type presents the Subject with a "slider" widget on-screen, and in response to the prompt the Subject can move the slider along a gradient and select a certain numeric value. The values that can be selected, as well as the displayed grid values, can be customized. For example, the Researcher may want the Subject to be able to select any integer value from 0-100 and have the grid show every 5th value, or perhaps the Subject can select every 5th value while only 0, 25, 50, 75, and 100 are displayed.

The Slider can also have "labels" at the ends and/or the middle point, defined by the Researcher. Each is normally a single word or short phrase used to further confirm to the Subject the meaning of the low/high/middle numeric values that are represented by Slider positions.

Statistics - A Questionnaire be configured to can keep statistics on the Subject's responses. The statistics kept include total, average (mean), minimum, maximum, and standard deviation. These are relevant only for Questions that are Numeric in Answer Format. Questions that contain Text format data are ignored when formulating the statistics for a Questionnaire. Each of these values forms another Subject Variable that is stored and can be used later by the software (see Subject Variables). The Standard Deviation calculation uses $1/N$ rather than $1/(N-1)$.

Announcement - An Announcement is an Item that is used to impart information about the Experiment to the Subject. It is not meant to be used to convey content information about any Alternatives in the Experiment, but of course nothing prohibits this kind of usage. A sample use of the Announcement might be to present the Subject with instructions on what to expect from the Experiment, e.g. "You will be given a questionnaire at the beginning..." The Announcement simply presents text to the Subject, and the Subject can view the Announcement as long as s/he wants before closing it.

Subject Variables can be embedded in the Announcement text and will be resolved in real time. Rudimentary HTML will also function if embedded correctly (see Using HTML in Text Fields in Part E: New Features).

Branch - A Branch is a special type of Item that can change the Subject's location in the Experiment. Without Branches the Subject will go through each Stage, and its Sub-stages, in order from beginning to end. Using a Branch the Experiment can "jump" the Subject to any Sub-stage of any Stage, and also change the Group that the Subject is part of. There are three types of Branches:

Absolute - The Absolute Branch always jumps the Subject to the designated Stage, Sub-stage, and Group (the interface allows the specification of "Current Group" in cases where the Group should not change). The Experiment continues from the start of the new Sub-stage (the Before Phase). This type of Branch can be used as a Before Item, Timed Item, or After Item.

Button Click - The Button Click Branch does not occur immediately; instead a button is placed on one side of the screen while Flow Items are scrolling. Note, therefore, that this type of Branch can ONLY be used as a Timed Item or Follow-on Item in the Flow Phase. The same specifications for destination Stage, Sub-stage, and Group are made, but the Branch is not executed unless/until the Subject clicks the button. The label of the button can be specified and should give Subjects a good idea of where the Branch takes them.

Button Click (cont.) - There are three sub-types of the Button Click Branch, defined by the action they take:

Branch - The standard Action is simply called "Branch" and works as described above: when the button is clicked, the Branch is executed.

Persist - The Button with a Persist Action does nothing; the number of times the Button is clicked is stored in the Subject Variable for the Branch (see paragraph following Conditional Branch).

Disappear – The Disappear Action also does nothing (i.e. there is no branch or jump), but the button disappears once it is clicked. The click is stored as it is for the Persist Action above.

Conditional - The Conditional Branch is like the Absolute Branch in that it specifies a Stage, Sub-stage, and Group, and can be used as a Before Item, Timed Item, or After Item. But the Branch does not automatically happen. Instead, the software tests the Condition supplied by the Researcher. If the Condition is true, then the Branch occurs, otherwise the Branch is ignored.

The Condition is written as a Boolean expression in JavaScript and can reference Subject Variables that are created by Questions and Calculations. For example, if a Questionnaire named "Affiliation" was given early that asked a Subject for his/her party (using a Question named "Party"), then this information can be tested later in a Conditional Branch. A Conditional statement might be:

```
"[[Affiliation.Party]]" == "democrat"
```

If that statement resolves to "true" then the Branch will be executed, otherwise the Branch will be ignored.

Note that the use of all lower-case in the comparison term ("democrat") is significant here, as Subject Variables (such as [[Affiliation.Party]]) are standardized to all lower-case characters before comparison. Also note that quotes are required around the Subject Variable itself if it is being compared to text.

All Branches have an associated Subject Variable that is specified by "br." plus the Branch name. For example, a Branch named "returnToSender" would have a Subject Variable called

`br.returnToSender`

This Numeric Subject Variable is incremented each time a Branch is taken. It's useful for knowing whether a Conditional Branch was taken or not, and is most useful for Button Click Branches, as the value can be used to determine how many times the Subject clicked on any Button Click Branch.

Calculation - A Calculation Item does nothing that is visible to the Subject; the Experiment continues running exactly the same when a Calculation is executed. The Calculation simply takes previously existing data and manipulates it in some way, storing the results in a Subject Variable whose name is the Name of the Calculation.

A Calculation, like a Condition, is written using JavaScript. A Calculation could be something as simple as:

`3 + 3`

in this case, the value "6" would be stored in the Subject Variable. Previously-defined Subject Variables can be used in Calculations, either from Questions in Questionnaires, Branches, or previous Calculations. For example, if the Calculation named "Add" contained "3+3" and that Calculation were performed, another Calculation called "Mult" might be defined as:

`[[Add]] * 3`

The Subject Variable "Mult" would contain 18 after that Item were presented.

Results of Calculations, in the form of Subject Variables, can be used in Conditional Branches as well as all Conditions for Item presentation, Question presentation, and Alternative inclusion. Results of Calculations can be specified as Text or Numeric format by the Researcher.

Item Display Method: An Item's Display Method refers to the Sub-stage Phase in which the Item can be presented. There are three Phases to each Sub-stage: the Before Phase, the Flow Phase, and the After Phase. Every Sub-stage/Group pairing contains a different set of Before Items, After Items, Flow Items, Timed Items, and Follow-On Items as described below:

Before Items - These Items are presented, in the order the Researcher specifies, in the Before Phase of the Sub-stage. Any type of Item (Stimulus Item, Questionnaire, Announcement, Branch, or Calculation) can be used here, with the following exception: Branches that are Button Click Branches will not function in the Before Phase, so it is useless to add them as a Before Item (they will be ignored).

After Items - These Items are presented, in the order the Researcher specifies, in the After Phase of the Sub-stage. Like the Before Items, these Items can be of any type, with the same restriction on Button Click Branches.

Flow Items - These Items are presented in the Flow Phase of the Sub-stage, normally thought of as the "main" part of the Sub-stage. This is when Flow Items are scrolling down the screen. The number of Flow Items presented depends upon how many have been added to the Sub-stage and the Duration of the Sub-stage. The rules for when the Flow Phase ends are covered in the description of Sub-stage: Flow Phase.

Only Stimulus Items can be Flow Items, and within Stimulus Items, Ticker Items are excluded from being Flow Items. In other words, only Text Items, Image Items, and Video Items can be added as Flow Items. [Note: it is possible to use a Ticker Item as a Stimulus Item, by changing another type of Stimulus Item into a Ticker Item after it has already been added as a Flow Item. This is rarely useful but it will function.]

Flow Items are presented as rectangular panels that display a small amount of the Stimulus Item's data. The Item's headline is present and the Item's synopsis can optionally be presented as well. When a Flow Item's panel is selected (clicked) by the Subject, it expands to present the full text, image, or video contents of the Stimulus Item. Text and Image Items stay open until closed by the Subject; Video Items close automatically when the video has completed.

Flow Items are ordered randomly from the list of Flow Items that have been added to the given Sub-stage/Group pairing. Each added Flow Item has a designated number of times specified that it will appear, called the number of "Shows" in DPTE. When this number is greater than one, a Flow Item panel will not appear twice in a row unless it is unavoidable.

Flow Items (cont.) - Information on every Flow Item made available, clicked on, etc. is kept as part of the Additional Stored Data and is covered in more detail in that section.

Timed Items - Timed Items are presented during the Flow Phase (the time during which Flow Items are scrolling down the screen). Any Item type can be a Timed Item. Each Timed Item has a designated time at which it appears during the Flow Phase. The Researcher also designates whether or not the clock stops when the Timed Item is presented; if the clock is stopped, Flow Items stop scrolling until the Timed Item is closed, then resume scrolling as the clock resumes.

Note: It is important to consider carefully the time parameters for a Timed Item. If multiple Timed Items share the same appearance time, there is a limit to how many will be retrieved depending on server/internet lag. If multiple Timed Items are set to appear at the same time, the order of appearance of the Items may be essentially random. It is best to give each Timed Item a unique appearance time, and the only way to guarantee that Timed Items will not overlap is to stop the clock for Timed Items that appear near to either other in appearance time.

Another thing to note is the use of Questionnaires and Calculations as Timed Items. If a result from a Timed Item is important (for a Branch, for example), put it at least one second away from any other Timed Item and turn the Clock off. Otherwise there is no way to know how long the Subject will be in the Questionnaire, or how long the Calculation will take, and DPTE might not have the data it needs to perform a conditional check.

Finally, note that stopping the clock for a Timed Item will increase the amount of time the Subject spends in the Sub-stage, and this will be reflected in the timestamps in the Stored Data. A four-minute Sub-stage will take twice as long if the Subject leaves a Timed Item Announcement open for four minutes with the clock stopped.

Follow-On Items - These Items can be of any type, and they are relevant only to the Flow Phase. For a given Flow Item, a list of Follow-On Items can be designated. When the Subject clicks on the Flow Item and later closes it (or the Video finishes), the first designated Follow-On Item is presented.

If a Flow Item has more than one Follow-On Item, the next is presented immediately following the first one, until all have been presented. The Researcher determines whether the clock should be stopped or not during this process; if a Flow Item has several Follow-On Items, it is probably best to stop the clock or there could be interruptions by Timed Items, and a good amount of the remaining Flow Items will have passed by.

Condition - A Condition is a value or a piece of JavaScript code that can evaluate to TRUE or FALSE, and the DPTE Player takes action based on that result. Conditions are used in many places in DPTE.

Conditions are used in Conditional Branches, for example. If the Condition evaluates to TRUE, then the Branch is taken; if not, the Branch is not taken.

In DPTE 3.0, Conditions are also used for Stage Alternatives, Questionnaires, and all of the Item screens (Before Items, Timed Items, Flow Items, After Items, and Follow-On Items).

For Stage Alternatives, each Alternative that is added to a Stage-Group can have a Condition. If that Condition is not true when that Stage begins, then the Alternate is not added to the Stage. Therefore, using Conditions, a Researcher can force a Stage-Group to include or exclude any Alternative, thereby making a custom set of Alternatives for that Stage-Group on the fly. This can affect the content of the Stage's Sub-stages as well, since any Specifically-assigned Stimulus Items whose Alternative is excluded from the Stage-Group will itself be excluded from the Sub-stage. In other words, if a Stimulus Item can't find its Alternative in the Stage-Group, the Stimulus Item is thrown away. The advantage of this is to reduce the number of Groups needed, since without this capability every possible combination of Alternatives must be created in a separate Group.

Stage Alternative Conditions are tested at the beginning of the particular Stage. Note that because they are tested before any Sub-stage—i.e. before any Questionnaires or Calculations—a Researcher must include a Stage to set any necessary Subject Variables prior to the Stage that tests them. In other words: Stage-Alternative conditions that test Subject Variables won't work in the first Stage, since no Subject Variables have been set to check against.

For the Items screens (Before, Timed, Flow, After, and Follow-on): Any Item that is added to any Substage-Group can have a Condition. This Condition determines whether that Item is indeed added to the Substage-Group. Using this method, a Researcher can create custom groupings of Items without having to create a separate Group in which to put them. If the Item's Condition fails, it is not presented. Note that an Item's Condition is tested right at the moment that the Item is due to be presented; therefore the results of a Questionnaire given immediately before a Before Item, for example, could affect whether that Item is presented.

For Questionnaires, the Condition is attached to each Question added to the Questionnaire. If the Condition does not pass, the Question is not presented. This is tested immediately before the Question is to be given to the Subject, so the Subject's answer to the previous Question can be used to determine whether the current Question should be presented.

Condition (cont.) - Conditions are written in JavaScript and must be properly formatted. When using Subject Variables in your comparison, it is necessary to take into account the type of comparison. For Numeric Subject Variables, it is straightforward:

```
[[MyCalc]] > 3
```

resolved to TRUE if the Subject Variable MyCalc is indeed greater than 3.

For text comparisons, quotes must be used around the Subject Variable. For example, if the Subject Variable named myString contains the string “hello” then

```
"[[myString]]" == "hello"
```

will correctly resolve to the comparison

```
"hello" == "hello"
```

which is true. Without quotes, the comparison would be

```
hello == "hello"
```

which to JavaScript is comparing a variable called hello to the string “hello”, which is not the comparison the Researcher intended to make. Normally this will resolve to false.

Another important point concerns capitalization. When DPTE encounters a Subject Variable in a comparison, all Text Subject Variables are standardized to lower-case. This is so that case-usage by Subjects via Questionnaires is not important, and so that Subject Variables can be compared to each other directly without any processing required by the Researcher.

Therefore, the comparison,

```
"[[SomeSubjectVar]]" == "Republican"
```

will ALWAYS be FALSE, since SomeSubjectVar will always be all-lowercase. To counter this, always use all-lowercase in the comparison string, as such:

```
"[[SomeSubjectVar]]" == "republican"
```

See the DPTE on-line FAQ for a JavaScript primer and more information.

Section One Part C: Experiment Creation Steps

This section describes, in outline form, the recommended steps for creating an Experiment. There are many ways to approach Experiment creation but in general the top tab bar ("Alternatives", "Attributes", etc) is placed in a logical order to follow.

Selecting the Stages tab reveals the lower (Stages:) tab bar, and some of these areas should be completed before continuing along the top to define Items which can be added to the Sub-stages.

- 1) Create a new Experiment
 - a) Go to **Experiment Setup** tab
 - b) Create new Experiment
 - c) Change Experiment's Name to something meaningful
 - d) Change Experiment's passphrase (must be 6+ characters in length)
 - e) Describe the Experiment briefly in the Description field (or use the Notes section on the Experiment Dashboard for more detail)
 - f) Add necessary Researchers as Co-investigators or Participants (this step is often saved until more of the Experiment has been created)
- 2) Create necessary Alternatives
 - a) Go to **Alternatives** tab
 - b) Create a new Alternative
 - c) Set the Distinct Name to something meaningful
 - d) Fill in Name, Short Name, Gender, etc.
 - e) If needed, create new Association for the Alternative
 - i) Set Association Name
 - ii) set Color, Symbol as needed
 - f) Select Association for the Alternative
 - g) Repeat as needed from step b
- 3) Create necessary Attributes
 - a) Go to **Attributes** tab
 - b) Create a new Attribute
 - c) Fill in Name, Short Name, etc
 - d) Repeat as needed from step b
- 4) Fill in Default Ratings for Alternatives/Attributes
 - a) Create Information Board of Default Ratings matrix (on paper/Excel/etc)

Example: an election simulation contains two candidates (Alternatives), Barack Obama and Mitt Romney. Two issues (Attributes) are dealt with in the Experiment: Health Care and Position on Iraq. The Information Board for this Experiment would be very simple and might look like this:

	Obama	Romney
Position on Taxes	1.50	7.00
Health Care	3.50	4.50

For each Alternative-Attribute pair, there is a corresponding value. For a non-trivial Experiment, creating an Information Board on paper may be helpful.

- b) Using your Information Board as a reference, fill in the appropriate values into the DPTE software. This can be done either from the Alternatives or Attributes screen.
 - c) When finished, you can use the "Open Info Board in New Window" button on the Attributes screen; this window displays the current Information Board for the Experiment, and can be used to double-check the values you entered.
- 5) Create necessary Stages and Sub-stages
- a) Go to **Stage** tab, **Stage: Sub-stages** tab
 - b) Create a new Stage
 - c) Fill in Distinct Name, Description
 - d) If you don't want the Time Remaining to show on a given Stage, deselect the checkbox for that Stage
 - e) Create Sub-stages for that Stage
 - i) Type in Sub-stage Name and Duration
 - ii) Add a Sub-stage
 - iii) Repeat as needed from i)
 - iv) If needed, change Sub-stage name, Duration, or order in the Sub-stages and Ordering grid
 - f) Repeat as needed from b
 - g) If needed, change order of Stages in the Stage Ordering in Experiment grid
- 6) Create spreadsheet for Experiment's Stages/Sub-stages/Groups structure

If your Experiment is complex at all, you will want to create a spreadsheet-type of grid (either on paper, or using Excel, etc) to keep track of how a Subject will move through the Experiment. This is particularly true if your Experiment requires the use of many Groups and/or many Stages and Sub-stages.

An Experiment requires at least one Group. But if you are testing multiple scenarios, or the Subject might be moved to another "track" depending on Questionnaire results, you may need more Groups. And for very complex Experiments—where certain Alternatives are eliminated from the pool for any reason—you might need dozens of Groups. Note that most of the perceived need for a very large number of Groups can be alleviated by using Conditions on the Stage Alternatives screen. The example below assumes you want to have multiple Groups instead of conditionally including Alternatives.

Consider an Experiment where the Subject is assigned randomly to participate in either the Republican or Democratic primary. This will require two Groups. If a Subject, based on a Questionnaire, could be assigned to elections with three of the four candidates, then four Groups will be required: One for candidates ABC, ABD, ACD, and BCD. You can see how, in order to achieve many possible combinations this way, you may need to have a lot of Groups.

To make the spreadsheet, vertical columns should represent Groups, while the increasing horizontal rows reflect the passage through Stages and Sub-stages. At each Stage, list the Alternatives that are applicable for that Stage and Group pair. For each Group/Sub-stage pair, note the Pace and Congruency setting; you can also list the particular Items that will be presented as Before, Flow, Timed, or After Items for that Group and Sub-stage pair. When finished, you should have a good reference to complete the rest of the Experiment's construction in DPTE.

A sample spreadsheet with four Groups and one Stage with two Sub-stages follows. There are four Alternatives, and each Group will present information on three of the four as described above. In this example the main difference in the Groups is the difference in available Alternatives. Each Group has different Items to present because of the difference in Alternatives. Just for illustrative purposes, in Groups 1 & 3 the Subject is given a Questionnaire (Poll 1) as an After Item at the end of Sub-stage 1, while in Groups 2 & 4 Poll 1 is presented as a Before Item.

Here, a Subject is put into 1 of the 4 Groups with equal likelihood. Another common technique is to create a Group called "Everybody", in which 100% of Subject start before being branched into their new Group based on their Questionnaire responses.

	Group 1	Group 2	Group 3	Group 4
	"Both Dems A" 25%	"Both Dems B" 25%	"Both Reps A" 25%	"Both Reps B" 25%
<i>Stage 1</i> <i>"Primary"</i>	<u>Stage Alternatives:</u> Barack Obama (D) Hillary Clinton(D) John McCain (R)	<u>Stage Alternatives:</u> Barack Obama (D) Hillary Clinton(D) Mike Huckabee(R)	<u>Stage Alternatives:</u> John McCain (R) Mike Huckabee(R) Barack Obama (D)	<u>Stage Alternatives:</u> John McCain (R) Mike Huckabee(R) Hillary Clinton (D)
<i>Sub-stage 1</i> <i>"Jan-Apr"</i>	<u>Sub-stage info:</u> Duration: 00:01:00 Congruency:100% Pace: 3 seconds	<u>Sub-stage info:</u> Duration: 00:01:00 Congruency:100% Pace: 3 seconds	<u>Sub-stage info:</u> Duration: 00:01:00 Congruency:100% Pace: 3 seconds	<u>Sub-stage info:</u> Duration 00:01:00 Congruency:100% Pace: 3 seconds
Before Items		Q: Poll 1		Q: Poll 1
Flow Items	Text:Iraq-Cons(7) Text:Iraq-Neut(4) Text:Iraq-Lib(1) Vid:Iraq-Obama Img:Iraq-Clinton	Text:Iraq-Cons(7) Text:Iraq-Neut(4) Text:Iraq-Lib(1) Vid:Iraq-Obama Img:Iraq-Clinton	Text:Iraq-Cons(7) Text:Iraq-Neut(4) Text:Iraq-Lib(1) Vid:Iraq-McCain Img:Iraq-Huckabee	Text:Iraq-Cons(7) Text:Iraq-Neut(4) Text:Iraq-Lib(1) Vid:Iraq-McCain Img:Iraq-Huckabee
Timed Items				
After Items	Q: Poll 1		Q: Poll 1	
<i>Sub-stage 2</i> <i>"May-Aug"</i>	<u>Sub-stage info</u> Duration: 00:01:00 Congruency: 0% Pace: 2 seconds	<u>Sub-stage info</u> Duration: 00:01:00 Congruency: 0% Pace: 2 seconds	<u>Sub-stage info</u> Duration: 00:01:00 Congruency: 0% Pace: 2 seconds	<u>Sub-stage info</u> Duration: 00:01:00 Congruency: 0% Pace: 2 seconds
Before Items				
Flow Items	Text:Hlth-Con(7) Text:Hlth-Neu(4) Text:Hlth-Lib(1) Vid:Hlth-Clinton Vid:Hlth-Obama	Text:Hlth-Con(7) Text:Hlth-Neu(4) Text:Hlth-Lib(1) Vid:Hlth-Clinton Vid:Hlth-Obama	Text:Hlth-Con(7) Text:Hlth-Neu(4) Text:Hlth-Lib(1) Vid:Hlth-McCain Vid:Hlth-Huckabee	Text:Hlth-Con(7) Text:Hlth-Neu(4) Text:Hlth-Lib(1) Vid:Hlth-McCain Vid:Hlth-Huckabee
Timed Items				
After Items	Q: Poll 2	Q: Poll 2	Q: Poll 2	Q: Poll 2

During the process of creating an Experiment, you can generate a version of the Experiment's spreadsheet by going to the Experiment Setup screen, and on the Experiment Dashboard selecting Visualize. This will create an Excel file filled in much like the example below, which you can use to check against your idea of how the Experiment is supposed to be set up. It will also highlight, in yellow, the cell in which the Researcher is working, depending on the dropdown selections for Stage, Sub-stage, and Group in the Stages: screens (Before Items, Timed Items, et al). You must have at least one Group and Stage defined to make use of the Visualization, and it is most useful when the Experiment has already been “fleshed out” a bit.

- 7) Create the necessary Groups for the Experiment
 - a) Go to **Groups** tab
 - b) Create a new Group
 - c) Give the Group a Distinct Name and optional Description
 - d) Fill in Congruency and Pace (and optionally, Portion) for each Sub-stage in grid
 - e) Repeat as needed from b
 - f) When all Groups are created, fill in the Group Subject Assignment grid with percentages corresponding to desired likelihood of random selection
- 8) Designate the active Alternatives in each Group for each Stage
 - a) Go to **Stages** tab: **Stage:Alternatives** sub tab
 - b) Choose a Stage from the top menu
 - c) Choose a Group from the lower menu (note: the For All Groups option may be used to add an Alternative that should belong to all Groups for a Stage)
 - d) Choose the set of Alternatives to add on the right side
 - e) Click Add Alternatives (you can choose to add to a single Group, all Groups, or choose from a list as needed)
 - f) Repeat as needed from step b
 - g) For each Alternative, you can optionally write a Condition that determines whether the Alternative is added to the Stage Alternatives (this can be used to create “custom” Groups on the fly – see Conditions in Part B)
- 9) Define Stimulus Items (steps 9 thru 13 can be in any order desired)
 - a) Go to **Stimuli** tab
 - b) Create a new Stimulus Item
 - c) Fill in Name, Rating, Headline, Synopsis, etc. (Synopsis can be blank)
 - d) Choose Item Relationship to Attribute, if used
 - e) Choose Item Relationship to Alternative, if used
 - f) Select Stimulus Item Type (Text, Image, Video, or Ticker)
 - g) Fill in Type-specific information (Text, Image/Video URL, etc)
 - h) Repeat as needed from b
- 10) Define any Questionnaires needed
 - a) Go to **Questionnaires** tab
 - b) Create a new Questionnaire
 - c) Change Name of Questionnaire to something meaningful
 - d) If an intro page is desired, fill in Introductory Text; otherwise leave it completely blank to suppress the intro page

- e) Decide on Header Format and whether to Keep Statistics and/or provide an explicit Skip button
 - f) As needed, create new Questions for the Questionnaire
 - i) On right side of Questionnaires screen, create new Question
 - ii) Fill in Name, and Text (the prompt) of the Question
 - iii) If needed, supply the URL for the Question's image or video
 - iv) Choose the Type from menu
 - v) if Multiple Choice or Fill In the Blank, choose Text or Numeric format
 - vi) if Multiple Choice/Multiple Answer, check "Display as list box" if a list box or combo box display is required
 - vii) if Multiple Choice/Multiple Answer, create Possible Answers
 - (1) Type in text of answer (and value if applicable)
 - (2) click "Add"
 - (3) repeat/edit as needed
 - (4) check "Randomize Order" if Possible Answers should appear in a random order
 - viii) Fill in Type-specific parameters for Question
 - ix) repeat all of step f) as needed
 - g) Add Question to Questionnaire
 - h) If needed, write Condition for the Question to determine whether it will be presented
 - i) repeat as needed from step g)
 - j) repeat as needed from step b)
- 11) Define any Announcements needed
- a) Go to **Announcements** tab
 - b) Create new Announcement
 - c) Fill in Distinct Name, Announcement Text
 - d) Repeat as needed from step b)
- 12) Define any Branches needed
- a) Go to **Branches** tab
 - b) Create a new Branch (note: if there are no Branches yet in your Experiment, you will need to do step d) before this step
 - c) Fill in Distinct Name, Description
 - d) Specify Branch destination (select Stage, Sub-stage, Group)
 - e) Determine Branch type (Absolute, Button Click, Conditional)
 - f) If Button Click
 - i) fill in Button Label that the Subject will see
 - ii) determine the Button Action desired
 - g) If Conditional, complete Condition
 - i) type in Condition code in JavaScript
 - ii) Insert Subject Variables as needed using menu (Note: you may want to complete Calculations first if you are using those Subject Variables in a Branch)
 - iii) Use "Test" button to insure viable syntax
 - h) Repeat as needed from b)

- 13) Define any Calculations needed
 - a) Go to **Calculations** tab
 - b) Create a new Calculation
 - c) Change Distinct Name, add Description
 - d) Determine Format: Text or Numeric
 - e) Encode Formula for Calculation
 - i) type code in JavaScript
 - ii) use menu to add Subject Variables
 - iii) use Test button to insure viable syntax
 - f) Repeat as needed from b
- 14) Add Before Items (steps 14 through 18 can be in any order)
 - a) Go to **Stages** tab; **Sub-stage: Before Items** sub-tab
 - b) Select Stage, Sub-stage, and Group
 - c) Select Item Type from menu
 - d) Select Items on right-side grid
 - e) Optionally use All Groups or Certain Groups in menu to determine which Groups the Item is added to
 - f) Add Items
 - g) Use arrows to move Item earlier or later in order
 - h) Repeat as needed
 - i) Set Item Conditions as needed
 - j) Repeat as needed from b, c, or d
- 15) Add Timed Items
 - a) Go to **Stages** tab, **Sub-stage: Timed Items** sub-tab
 - b) Select Stage, Sub-stage, Group
 - c) Select Item Type from menu
 - d) Select Items on right-side grid
 - e) Optionally use All Groups or Certain Groups in menu to determine which Groups the Item is added to
 - f) Add Items
 - g) In left-side grid, change Hours, Minutes, Seconds of display time for Timed Items
 - h) Set Item Condition if needed
 - i) Repeat as needed from b, c, or d
- 16) Add Flow Items
 - a) Go to **Stages** tab, **Sub-stage: Flow Items** sub-tab
 - b) Select Stage, Sub-stage, Group
 - c) Select Items on right-side grid
 - d) If using For All Groups, set number of Shows in right-side grid before adding
 - e) Optionally use All Groups or Certain Groups in menu to determine which Groups the Item is added to
 - f) Add Items
 - g) In left-side grid, change number of Shows if needed
 - h) Set Item Condition if needed
 - i) Repeat as needed from b or c

- 17) Add After Items
 - a) Go to **Stages** tab; **Sub-stage: After Items** sub-tab
 - b) Select Stage, Sub-stage, and Group
 - c) Select Item Type from menu
 - d) Select Items on right-side grid
 - e) Optionally use All Groups or Certain Groups in menu to determine which Groups the Item is added to
 - f) Add Items
 - g) Use arrows to move Item earlier or later in order
 - h) Set Item Condition if needed
 - i) Repeat as needed
 - j) Repeat as needed from b, c, or d
- 18) Add Follow-on Items
 - a) Go to **Stages** tab; **Sub-stage: Follow-on Items** sub-tab
 - b) Select Stage, Sub-stage, Group, AND Flow Item
 - c) Decide whether clock should be stopped (uncheck box) or running (check box) when the Flow Item's Follow-on Items are presented
 - d) Select Item Type from menu
 - e) Select Items on right-side grid
 - f) Optionally use All Flow Items or Certain Flow Items in menu to determine which Flow Items the Item is added
 - g) Add Items
 - h) Use arrows to move Item earlier or later in order
 - i) Set Item Condition if needed
 - j) Repeat as necessary
- 19) Use the Experiment Dashboard (on the Experiment Setup screen) to check and customize your Experiment
 - a) Settings – Choose the “Player Text String” tab to control all text that shows up in the Player, allowing it to be customized for different languages or simply modified for the Researcher's purposes.
 - b) Search/Replace – use this option to change text globally in the Experiment. Used with care, this window can also help you if you have changed the name of a Question or Questionnaire and already have javaScript references to that Subject Variable. See Subject Variables in Part D for more information.
 - c) Notes – this area is used for making detailed notes about the Experiment. It can be edited by the Owner and all Researchers who are Co-investigators, so every member of an Experiment’s team can contribute.
 - d) Visualize
 - i) Click Visualize for an Excel spreadsheet matrix representing your Experiment and its content
 - ii) Zoom out to get a "broad overview"
 - iii) Zoom in for detailed look at which Items are in which Sub-stage/Group
 - iv) The highlighted area (yellow) corresponds to the currently selected Stage, Sub-stage, and Group in any of the Sub-stages screens (After Items, et al)
 - v) The second tab (or excel "sheet") contains information on the Branches in your Experiment

- vi) Tab three is a list of all of the Experiment's Questionnaires and the Questions contained in them
- e) Test In Player
 - i) To test run your Experiment, use Test In Player
 - ii) The Player will run in test mode (data is tagged as test data) in the DPTE Player, allowing you to see if things look and perform the way you expect
- f) Diagnostics
 - i) On the Experiment Screen, choose Run Diagnostics
 - ii) Check or uncheck the tests you want/don't want performed. The default set is recommended for speed, or use all of them if you want a full report. The tests are:
 - (1) Structure: Required Elements - Tests if the Experiment has a Group and a Stage with at least one Sub-stage
 - (2) Structure: Stages & Sub-stages - This checks that every Sub-stage is properly linked to a Stage; this is rare and occurred only in pre-1.0 versions of DPTE
 - (3) Stim Items: Specific Alts and Atts - For each Stimulus Item, checks whether the Item has a NULL specific Alternative or Attribute (occurs if Researcher deletes an Alt or Att designed as an Item's Specific Alt or Att)
 - (4) Stim Items: Stage Alternatives - for each Stimulus Item in a given Stage-Group, if the Item has a specific Alternative, checks if the Alternative has been added to the Stage-Group
 - (5) Stim Items: Blank Text in heading/body/URL - checks for blank fields
 - (6) Stim Items: Missing URL in Image/Video - checks for blank fields
 - (7) Conditions: Test all javaScript for validity - makes sure JavaScript is well-formed in every instance used in the Experiment
 - (8) Conditions: Verify referenced Subject Variables - makes sure they exist if used by a Condition or Calculation
 - (9) Misc: Branch destinations - makes sure there is a valid Substage-Group destination to jump to (no null values etc.)
 - iii) The window at the bottom will contain errors and warnings and further instructions. Cut and paste this text into another document if it is too large.
- g) Download Results - If you have run experiments with some Subjects, you can Download results in two ways
 - i) Rectangular Data Set - The Rectangular Data Set is a large, complex format for importation into packages like SPSS. The format is described in Part D: Running An Experiment And Accessing Results
 - ii) Recorded Events - this option downloads a spreadsheet containing a list of all Events recorded for this Experiment, and a list of Subject Variables stored. This is a simpler and smaller format than the Data Set. The data recorded is described in Part D.
- h) Data Cleanup – The Owner can remove Results data for the Experiment, removing Test data, and non-completed Subjects, or, by using the options in the dialog, can remove actual data and completed Subject data, too.

20) Social Experiments - see Section Three for more information about Social Experiments.

The options for Social Experiments are specified in a few places in DPTE.

- a) Go to Settings on the Experiment Dashboard - the Social Experiment Options tab contains most of the options needed to define a Social Experiment. See the Settings screen in Section Two for more details.
- b) Check the “Enable Social Experiment” box to enable the Social options. If you don’t check this box, none of the controls/settings below it will be available, and the options on the other screens won’t be visible.
- c) Go to Stages: Before, Timed, Flow, After, and Follow-on screens to designate which Items should be Shareable. See Section Three for information on Shareable Items. Note that the “Shareable” column is only visible if “Enable Social Experiment” is checked on the Social Experiment Options tab in the Experiment Dashboard’s Settings.
- d) Go to Stages – Timed Items to designate which Items should be Shared Items. See Section Three for more information. Note that the “Shared” column is only visible if “Enable Social Experiment” is checked on the Social Experiment Options tab in the Experiment Dashboard’s Settings.
- e) To create a “starting state” for Social Experiment data (Button Click counts and Comments), go to the Stimuli screen and the Questionnaire screen. There you can use the Modify Social Data button to edit the Social data. Note that the Modify Social Data button is only visible if “Enable Social Experiment” is checked on the Social Experiment Options tab in the Experiment Dashboard’s Settings.

Section One Part D: Running an Experiment and Accessing Results

Running an Experiment

An Experiment is run by accessing a URL with the following format:

`http://dpte.polisci.uiowa.edu/dpte/action/player/launch/expNum`

where *expNum* is the number of the Experiment you want to run. This is listed in the Experiment menu box after the Experiment's name.

You can add a Group number (found in the Group menu on the Group screen) after the Experiment number to force the Subject to start in that particular Group, as:

`http://dpte.polisci.uiowa.edu/dpte/action/player/launch/expNum/groupNum`

Optional parameters can follow these in the URL:

To put the Subject in test mode, add `test=1`

To include the passphrase (fills it in for the Subject) use `pass=passphrase` using the Experiment's actual passphrase of course.

To include a Researcher-Assigned ID* for the Subject, add `raid=myID`

Each of these are used in URL-encoded format, with a "?" before the first parameter and an ampersand (&) between parameters, so for example:

`http://dpte.polisci.uiowa.edu/dpte/action/player/launch/100/200?pass=NotSecret&raid=12345`

will launch Experiment #100, put the Subject in Group #200, fill in the password "NotSecret" and assign the Subject a researcher-id of "12345"

*the Researcher-Assigned ID can be any value, string or numeric, that the Researcher assigns to the Subject, normally to associate a Subject's results with non-DPTE data from the same person (perhaps a paper questionnaire the Subject previously took).

Accessing Experiment Results

Whenever an Experiment is run by a Subject, data is generated that includes a variety of information about the Subject, what the Subject saw and clicked on during the Experiment, answers to Questions asked of the Subject, and other status information. This information is divided into three areas: **Recorded Events**, **Subject Variables**, and **Comments**. When you Download Results for a DPTE Experiment and choose Recorded Events, you receive one file (in .csv format) for each of these areas.

Recorded Events file

All events that occur in the Player as a Subject is running an Experiment are recorded in the system. The events that are recorded are:

- Experiment started.
- Experiment ended.
- Group assigned (when a Subject is newly assigned a Group as well as each time the assigned Group changes for the Subject)
- Stage started.
- Stage ended.
- Sub-stage started.
- Sub-stage ended.
- Before Item presented.
- Before Item closed.
- Timed Item presented.
- Timed Item closed.
- Flow Item appeared (as a Flow Panel)
- Flow Item disappeared (Flow Panel left the screen)
- Flow Item opened (clicked on by the Subject)
- Flow Item closed
- After Item presented.
- After Item closed.
- Follow-on Item presented.
- Follow-on Item closed.
- Branch Occurred (This event is recorded whenever an Absolute Branch is encountered. It is also recorded when a Conditional Branch evaluates to true and the branching occurs.)
- Branch Did Not Occur (This event is recorded when a Conditional Branch is encountered but does not evaluate to true and hence the branching does not occur).
- Branch Button Selected (The event is recorded if a Subject clicks on the button of a Button Branch).
- Question presented.
- Social Button selected (includes the number, 1-5, of the Social Button)*
- Comment window opened.*
- Comment window closed.*
- Comment recorded.*

* for Social Experiments only

Each event is associated with a unique numeric code in the database, and the Event Name is also stored to make the data more readable. Several other fields of information are stored along with each Event; the chart on the next page details these fields.

For every event, the following details are recorded (as applicable):

Data Item	Field in the database	Notes
Subject Id	event_subject_id	Unique identifier of the current Subject running the Experiment
Event Id	event_id	Unique identifier of the event itself (set by database)
Event time	event_creation_time	The server time at which the event occurred
Event order	event_order	A running number for each event recorded 1-xxxx... for each subject. Serves to simplify sorting events in the order they occurred.
Experiment time	event_elapsed_time_exp	Elapsed time of the event in Experiment (in seconds, significant to 1/1000 seconds).
Stage time	event_elapsed_time_stage	Elapsed time of the event in stage (in seconds, significant to 1/1000 seconds).
Sub-stage time	event_elapsed_time_substage	Elapsed time of the event in Sub-stage (in seconds, significant to 1/1000 seconds).
Event Name	event_name	Distinct name of event. One of the possible names from the bulleted list above.
Event Type	event_type	Numeric code that corresponds to Event Name
Group Name	group_name	Distinct name for group that the subject is assigned to, at the time of the event, if pertinent.
Group Id	group_id	Numeric Id of the Group
Stage	stage_name, stage_id	Distinct name for Stage where the event occurred, and numeric Id of that Stage.
Sub-stage	substage_name, substage_id	Distinct name for sub-stage where the event occurred, and numerica Id of the sub-stage
Item Type	item_type_name, item_type_code	Mnemonic string and numeric code for type of item for the event, if pertinent. Names/codes as follows: Stimulus Item = stim, 0 Questionnaire = quest, 1 Announcements = announce, 2 Branch = branch, 3 Calculations = calc, 4
Item	item_name, item_id	Distinct name of Item, and Id code of Item
Alternative	item_alt_name, item_alt_id	Distinct name of Alternative associated with Stimulus Item (or "General/None"), and the Alternative's Id if applicable
Attribute	item_att_name, item_att_id	Distinct name of Attribute associated with Stimulus Item (or "General/None"), and the Alternative's Id if applicable
Association	item_altassoc_name, item_altassoc_id	Distinct name of Alternative's Association (or "None") and that Association's id (relevant only for Stimulus Items)
Word count	item_wordcount	Word count for text Stimulus Items or Announcements; 0 for other events.
Congruent flag	item_congruent	Whether the stimulus item was associated with the alternative congruently or not. 0=incongruent, 1=congruent, null=not manipulated
Stimulus Item rating	item_rating	1.0 – 7.0 rating of stimulus item., null=not specified., other specific.
Same Attribute as previous?	item_intra_att_trans	This field is TRUE (1) if the subject selects a Flow Item having the same Attribute as the previously selected Flow Item. 0 = did not select same Attribute as previous one.
Same Alternative as previous?	item_intra_alt_trans	This field is TRUE (1) if the subject selects a Flow Item having the same Alternative as the previously selected Flow Item. 0 = did not select the same Alternative as previous one.
Same Attribute possible?	item_intra_att_trans_poss	This field is TRUE (1) if, at the time of the event, it was possible for the Subject to select a Flow Item having the same Attribute as the previously selected Flow Item. That is, a Flow Item with the same Attribute was present on the screen since the previous Flow Item was closed. 0 implies it was not possible to select the same Attribute.

Same alternative possible?	item_intra_alt_trans_poss	This field is TRUE (1) if, at the time of the event, it was possible for the Subject to select a Flow Item having the same Alternative as the previously selected Flow Item. That is, a Flow Item with the same Alternative was present on the screen since the previous Flow Item was closed. 0 implies it was not possible to select the same Alternative .
Clock-on flag	event_clock_on	Whether the DPTE Player clock was on or not. 0 = false, 1 = true (dpTE clock was on during event). Especially relevant when Timed items are active.
Question Name	item_question_name	The name of the question presented. This column is relevant only for the Question presented event.
Question Number	Item_question_num	The number of the question in the Questionnaire as configured in the researcher interface. This column is relevant only for the Question presented event.
Item Category	item_category	The category text of the item.
Alternative Category	item_alt_category	The category text of the item's Alternative
Attribute Category	item_att_category	The category text of the above Attribute
Attribute Subcategory	item_att_subcategory	The subcategory text of the above Attribute
Subject Var	subj_var	The Subject Variable created by a Question Presented event is stored here as a convenience. This field is also used to record the initial state of Button Click Counts and # of Comments for Shareable Items. This is stored on the Close event for Before, After, Timed, Flow, and Follow-on Items. The format consists of a 0 or 1 (1 = initial data was located; ignore data that starts with a 0), then the 5 button counts, and the comment count, for 7 integers total
Shared flag	item_shared	1 if the Item was presented as a Shared Item

Subject Variables file

Subject Variables are created by Questionnaires (mostly via Questions), Calculations, and Branches. They are held in local memory and are not written to the database until the Subject completes the Experiment. In other words, there will not be any Subject Variable data stored for Subjects who do not complete the Experiment for whatever reason.

In the case of Questionnaires, the answer that the Subject gives to each Question is stored in the format (Numeric or Text) specified by the Question. As mentioned before, the format of these Subject Variable names is

questionnaireName.questionName

Also, if Statistics are kept for that Questionnaire they will be stored as Subject Variables also. The format of the Subject Variable name is

questionnaireName.total
questionnaireName.ave
questionnaireName.min
questionnaireName.max
questionnaireName.sd (standard deviation)

The results of each performed Calculation is also stored as a Subject Variable, in the form (Numeric or Text) specified by the Calculation. The Calculation's Name is used as the name of the Subject Variable.

For each Branch there is an associated Subject Variable, with the prefix

br.

appended with the Branch name. Each time the Branch is executed, the Subject Variable is incremented. For Branch buttons, the Subject Variable is incremented each time the button is clicked.

NOTE that Subject Variables are OVERWRITTEN as the Experiment is run. So if a Questionnaire is presented twice, for example, only the results of the 2nd presentation are stored in Subject Variables.

The Subject Variables file received when Download Results – Recorded Events option is used contains all Subject Variables, tagged by Subject, as well as all System Variables. See Section F for a list of DPTE System Variables.

Comments file

Comments are left by Subjects during Social Experiments. The Recorded Events file will contain the Comment Recorded event, letting you know when a Comment was left and by whom, but the actual content of the Comments aren't in the Recorded Events file. The Comments file will contain all of the Comments left for a particular Experiment.

The Comments file contains the following information about the Comments for an Experiment:

comment_id	The comment's unique id
item_id	The Item the comment was left for
item_type	The type of the Item
subject_id	The id of the Subject that left the comment, or 0 if it was a Researcher-generated comment
screen_name	The screen name left by the Subject, if any
comment_text	Text of the actual comment
comment_date	Date and time the comment was left (Central time, U.S.)
group_id	The Id of the Group the Subject belonged to at the time

For an explanation of Comments see Section Three: Social Experiments

Rectangular Data Set

The Rectangular Data Set is a specialized format for use with statistical packages such as SPSS. The Data Set format uses data from the Recorded Events, Subject Variable, and Comment tables and expands it into a large format with one row per Subject and all of that Subject's test data in the columns that follow it.

Four separate files/file sets comprise the Rectangular Data Set:

- the "counts" file set (1 file per Sub-stage)
- the "durations" file set (1 file per Sub-stage)
- the ID-name table
- the "social data" file set (2 files per Sub-stage, for Social Experiments only)

The "counts" data set contains, for each Subject row:

- Subject ID
- Researcher-assigned ID
- Date (format YYYYMMDD)
- Time in 24-hour HHMM format
- for each each Alternative-Attribute combination (1 column each)
 - the number of times the Alternative-Attribute combination was chosen by the Subject during the Flow Phase.

The "durations" data set contains, for each Subject row:

- Subject ID
- Researcher-assigned ID
- Date (format YYYYMMDD)
- Time started (4 columns):
 - Time the Experiment started (HHMMSS.mmm)
 - Start time of the Substage (in seconds, offset from Experiment start time)
 - Start time of the Substage's Flow Phase (in seconds, offset from Exp. start time)
 - End time of the Substage's Flow Phase (in seconds, offset from Exp. start time)
- For each Group, a 0 or 1: was Subject part of Group at any time?
- For each Stimulus Item, 14 columns:
 - the TIME an Item first flowed, or was first presented to the Subject
 - the TIME an Item was first opened by, or was first presented to, the Subject
 - the DURATION the Item was viewed upon first open/presentation
 - the total number of times the Item was available in the Sub-stage
 - the total number of times the Item was viewed in the Sub-stage
 - the total DURATION the item was viewed in the Sub-stage
 - the ID of the Item's assigned Alternative
 - the ID of the Item's Attribute
 - the Word Count of the Item's main text
 - the Rating of the Item
 - 4 columns containing Category information: the Item's Attribute category and sub-category, the Item's Alternative's category, and the Item's category.

- For each Announcement in the Substage, 5 columns:
 - The TIME the Announcement was first presented to the Subject
 - The DURATION the Announcement was first viewed
 - The total number of times the Announcement was presented
 - The total DURATION the Announcement was viewed
 - The Word Count of the text in the Announcement
- For each Question the Subject sees in the Sub-stage, 3 columns:
 - Question number, in sequence, in the Sub-stage
 - The Subject's response, in Numeric format
 - The DURATION the Subject spent on the Question
- Transition data summary: 4 columns total:
 - Total sum of possible Alternative transition data
 - Total sum of actual Alternative transition data
 - Total sum of possible Attribute transition data
 - Total sum of actual Alternative transition data
- The total number of Flow Items accessed during the Sub-stage

The “Id-Name” table lists every object in the Experiment, its Type, and its Name. So, for every Branch, Group, Stage, Sub-stage, Stimulus Item, Announcement, Question, Questionnaire, Alternative, Attribute, or Calculation, there is a row. The columns are:

- Object ID: DPTE’s Id as used in other Rectangular Data Set files
- Object Type: Branch, Group, Stage, etc.
- Name: the Distinct name of the object

The “Social Data” file set contains a pair of files for each Sub-stage that has Social Data. Sub-stages with no Social activity do not generate a file pair. If an Experiment is not currently a Social Experiment, then this file set is not generated at all.

The first Social Data file is the Shareable Items sub-file. Each Subject has the following columns:

- Subject Id
- Researcher-Assigned ID
- Date (YYYYMMDD format)
- Time (in 24-hour HHMM format)
- For each Shareable Item, there is information on Button Clicks and Comments:
 - one column for each defined Social Button, noting the number of times the Subject clicked that button during the Sub-stage.
 - if Comments are enabled, there are two additional columns recording whether the Comment window was opened and whether a Comment was left for this item.

The second Social Data file is the Alternatives sub-file. It also contains the first four columns from above, and adds, per Alternative, the information on Button Clicks and Comments described above (but for Alternative).

The Rectangular Data Set download contains a zipped folder for each file set (the "counts", "durations", and if present, the "social data") while the ID-Name file is a single file.

Sub-stages without Flow Items may be skipped for the "counts" section, that is, a "counts" file won't be generated if there are no Flow Items for that Sub-stage.

All of these files can be opened with Excel version later than 2004; version prior to that cannot handle files with more than 256 columns.

IMPORTANT NOTE ABOUT THE RECTANGULAR DATA SET:

The Recorded Events table in the database is used to gather all Subject data for the Rectangular Data Set. However, to create the large tables used to build the Rectangular Data Set it is often necessary to refer to the structures in the Experiment itself. This means that the current state of the Experiment is often used to build parts of the Rectangular Data Set. Therefore it is best to not make modifications to an Experiment after data collection has begun.

Major modifications, such as deleting a Group, can result in the software being unable to construct the Rectangular Data Set at all. Lesser changes, such as removing Items from a Group/Substage, could cause some data to be missed or be unreliable. Minor modifications (such as changing a Text Stimulus Item's text) should have no effect, but it's still best to Duplicate an Experiment if you want to try out different things. Normally, variations in an Experiment can be included by having these variations among different Groups.

If anything in the Rectangular Data Set seems unusual, the data should be cross-referenced with the Recorded Events file download.

Section One Part E1: Features New to DPTE 2.0

The following features were new to DPTE 2.0, that is, they were not present in the 1.0 version and its early updates. The outermost indentation of the outline below is the screen (Experiment Setup, etc) then sub-screens, areas of the screen, or the on-screen control is described. This is just a listing; for more information on the feature itself, consult the Index of Terms that follows.

- ❖ Experiment Setup
 - Experiment Dashboard
 - Diagnostics
 - Download Results - Rectangular Data Set
 - Visualization
- ❖ Alternatives
 - Ratings
 - Ratings 0.00-7.00 now allowed (previously 1.00 to 7.00)
 - Rating of 0.0 = never assigned by DPTE Player
 - Assignment in Player
 - When two or more ratings are "tied", one is chosen randomly
 - "Bus Seat" rule for assignment followed
 - Associations screen
 - Icons can be larger (40x40, prev. 22x22)
- ❖ Attributes
 - Information Board window
- ❖ Stages
 - Sub-stages screen
 - Stage area
 - ◆ Show Time Remaining in Player or not
 - Alternatives
 - Conditional inclusion in Stage-Group
 - Before Items
 - Timed Items
 - Flow Items
 - After Items
 - All of the above (Before/Timed/Flow/After) have the following:
 - Conditional inclusion in Sub-stage/Group
 - Add/remove option "for Selected Groups" included
 - Follow-on Items - Entire Screen is new
- ❖ Groups
 - Portion added to grid
- ❖ Stimuli
 - Text can include Subject Variables
- ❖ Questionnaires
 - Questionnaires
 - Skip button option
 - Print Questionnaire button

- Conditional inclusion of Questions
- Questions
 - Font size, color, for Question Text
 - Subject Variables resolved in Question Text
 - Slider can have labels (left, middle, right)
 - Multiple Choice/Answer can have Randomized Order
- ❖ Announcements
 - Subject Variables can be included in Announcement Text
- ❖ Branches
 - new Button Click Button Actions: Persist and Disappear
 - Branches now have associated Subject Variables, incremented when Branch taken or Button clicked
- ❖ Calculations - no change

Section One Part E2: Features New to DPTE 3.0

The following features are new to DPTE 3.0, that is, they were not present in the 2.0 version and its early updates. The outermost indentation of the outline below is the screen (Experiment Setup, etc) then sub-screens, areas of the screen, or the on-screen control is described. This is just a listing; for more information on the feature itself, consult the Index of Terms at the end of the section.

- ❖ Experiment Setup
 - Archive Experiment feature
 - Add Researcher as Owner (transfer ownership)
 - Experiment Dashboard
 - Settings – all Social Experiment settings and functionality (see Section Three: Social Experiments)
 - Global Search/Replace
 - Notes window
 - Visualize – additions to Visualization output
 - Download Results – additions to Rectangular Data Set
 - Data Cleanup
- ❖ Stages
 - Before Items
 - Flow Items
 - After Items
 - Follow-On Items
 - All have Shareable check box if Experiment is Social
 - Timed Items
 - Has Shareable check box and Shared check box if Experiment is Social
- ❖ Stimuli
 - Headline and Synopsis now resolve Subject Variables
 - Supports Courier New and Times New Roman fonts in main text
 - Main text supports limited HTML including images and hyperlinks
 - Duplicate function now automatically specifies correct Alternative and Attribute when duplicating within the same Experiment
 - Has Modify Social Data button/dialog if Experiment is Social
- ❖ Questionnaire
 - Has Modify Social Data button/dialog if Experiment is Social
- ❖ Question
 - Supports Courier New and Times New Roman fonts in Question text
 - Question text supports limited HTML including images and hyperlinks
 - Can show video in Question using Image/Video URL field
 - Multiple Choice/Multiple Answer type have option to show as combo box/list box rather than radio buttons/check boxes
- ❖ Announcement
 - Courier New and Times New Roman fonts supported for Announcement Text
 - Announcement Text supports limited HTML including images and hyperlinks

Section I Part E3: Using HTML in Text Fields

Certain text fields in DPTE support rudimentary HTML; these are all the fields that allow changing of styles such as font, size, etc. These include:

- the Text Stimulus Item's Item Text field;
- the Announcement's Announcement Text field;
- a Question's Text field

HTML is written as it normally is except that the

< and > characters are replaced by
{ { and } } so that DPTE can properly insert the code as HTML.

For example, to display an image in a text field in DPTE, you would use:

```
{ {img src="http://www.mySite.com/testImage.jpg" } }
```

another useful thing is to include a hyperlink:

```
{ {a href="http://www.mylink.com" target="_blank" } }Here is a link{ {/a} }
```

note that the link won't automatically appear blue and underlined; to do you could add more HTML or just use DPTE's built-in underlining and color capabilities. Also note the use of `_target="blank"`; without that, the target page would open in the same window when clicked, and replace the DPTE Player!

Flash/Flex text fields (and therefore DPTE text fields) support a subset of HTML which includes the majority of simple commands, but complex HTML is not supported or recommended. It doesn't hurt to try, but don't count on using HTML to accomplish your DPTE goals.

Most of what you would use HTML for is already provided by DPTE, i.e. bold, italic, etc. Specifying new fonts will probably not work since all of DPTE's fonts are embedded.

A list of Flash-supported HTML is available at:

http://help.adobe.com/en_US/FlashPlatform/reference/actionsript/3/flash/text/TextField.html#htmlText

Section One Part F: List of DPTE System Variables

System Variables are special Subject Variables used internally by DPTE. These values can be displayed in text fields in Stimulus Items, Announcements, and Questions, or used in Conditions. They can also be manipulated by the Researcher to change things in an Experiment “on the fly,” though caution should be used to avoid undesired results.

To display a System Variable, simply treat it as any Subject Variable and use double brackets, i.e.

You have spent `[[SYS_VAR_TIME_IN_EXPERIMENT]]` seconds here.

To use a System Variable in a Condition, again use it like a Subject Variable:

`[[SYS_VAR_TIME_IN_EXPERIMENT]] > 10`

To modify a System Variable, simply create a Calculation with the same exact name as the System Variable you want to modify (no brackets), and in the Formula field give it the value you want the System Variable to hold. When that Calculation is presented as a Before, After, or Timed Item it will store its value in the System Variable.

Using the above method you can only set a System Variable to one value during an Experiment, since each Calculation takes only a single value. But using JavaScript variables you can dynamically change the System Variable as you see fit. For example, if you make a Calculation with the Formula

```
myVar = 3;
```

this will establish a JavaScript variable called myVar in memory. Other Calculations can also set the value of myVar in the same way. Then, in your Calculation named for a System Variable, set the formula to

```
myVar
```

and DPTE will set the value of the Calculation (and therefore the System Variable) to myVar, whatever it contains at the time.

The Recorded Events download set contains a Subject Variables file that will contain the final values of all of the System Variables in DPTE; it can be used as a reference for the kind of values held by the System Variables in the list below.

DPTE System Variables and their contents (as of version 3.0):

- **SYS_VAR_FLOW_PACE**: contains the current Pace value. Values are between 1 and 900; changes outside these bounds will be ignored.
- **SYS_VAR_FLOW_PORTION**: contains the Portion (1-6) of the current Flow Phase. For changes, values outside 1-6 will be ignored.
- **SYS_VAR_RECORD_EVENTS**: Holds either true or false, depending on whether events are being recorded. Always starts as true, regardless of whether Test Mode is being used or not.
- **SYS_VAR_SOCIAL_BUTTONS**: Reflects the number of Social Buttons on a Shareable Item on an Experiment-wide basis. Can be from 0 to 5.
- **SYS_VAR_SOCIAL_COMMENTS**: Holds either true or false, enabling or disabling Comments for an Experiment. Note that the Experiment must be a Social Experiment to have Comments (see **SYS_VAR_SOCIAL_EXP**)
- **SYS_VAR_SOCIAL_EXP**: Holds true or false; makes an Experiment a Social Experiment, or disables Social functions.
- **SYS_VAR_SUBJECT_ID**: The Subject Id of the current Subject. It is not advisable to ever modify this value.
- **SYS_VAR_SUBJECT_IP_ADDRESS**: The IP address of the current Subject, normally in #:#:#:#:# format. It is rarely useful to modify this value.
- **SYS_VAR_SUBJECT_NAME**: This is the latest value entered by the Subject if s/he has left a Comment and filled in the “From:” field. Note that this may not correspond in any way with the Subject’s actual name.
- **SYS_VAR_SUBJECT_RAID**: If a Researcher-Assigned ID was passed through the URL to launch the Player, this System Variable will hold the value.
- **SYS_VAR_TIME_IN_EXPERIMENT**: The time in the Experiment in seconds (to the 1/1000th of a second). Probably shouldn’t be modified.
- **SYS_VAR_TIME_IN_STAGE**: The time spent in the Stage, in seconds (to the 1/1000th of a second). Probably shouldn’t be modified.
- **SYS_VAR_TIME_IN_SUBSTAGE**: The time spent in the Substage, in seconds (to the 1/1000th of a second). Probably shouldn’t be modified.

Index of Terms

Absolute Branch: **18**, 18, 28, 34
After Items: 7, 8, 9, 17, 18, **20**, 22, 26, 29, 34, 36, 42, 44, 46
After Phase (of Sub-stage): 7, 8, **9**, 20
Alternative: **6**, 7, 9, 10, 11, 12, 13, 14, 17, 19, 22, 24, 25, 26, 26, 31, 35, 36, 39,
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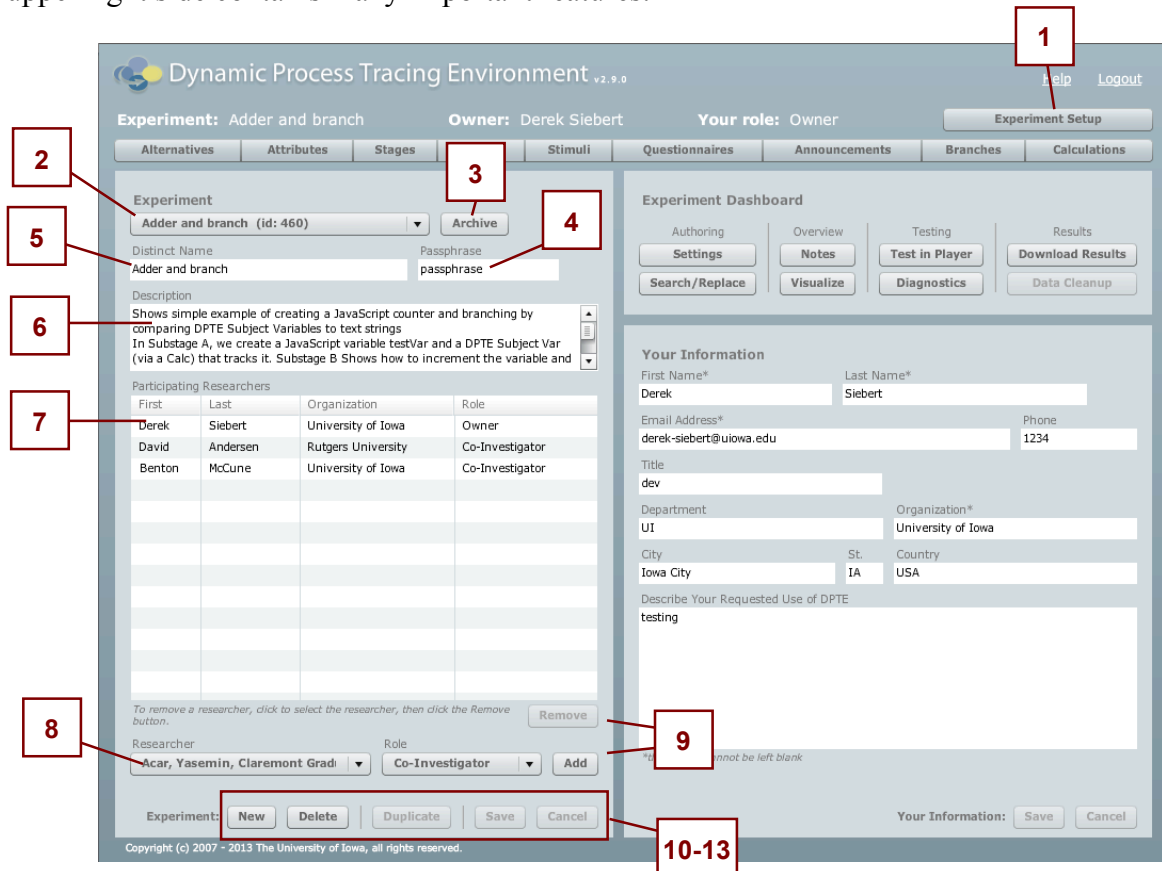
Section Two

DPTE Researcher Interface Screens

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Experiment Setup screen

This section explains the Experiment Setup screen, which displays overall Experiment information on the left side, and Researcher information to the right. The Experiment Dashboard on the upper right side contains many important features.



- 1) The Experiment Setup screen is accessed by clicking the “Experiment Setup” button in the upper right, above the main Navigation Bar. This screen opens by default after you login.
- 2) Experiment menu: This menu allows you to switch between Experiments that you have access to, i.e. Experiments in which you are listed as Owner, Co-investigator, or Participant. When you select a new Experiment the screen refreshes and displays data for that Experiment; the Experiment name, the Owner, and your Role are listed above the Navigation Bar. Note that when you make any changes to the Experiment on this screen you cannot switch to another Experiment until you save or cancel your changes.

The Experiment menu displays the current Experiment’s Distinct Name and Experiment id.

- 3) Archive/Unarchive button: This button is only visible if you are the Owner of the current Experiment; it allows you to “Archive” an Experiment, which means the Experiment cannot be edited, cannot run Subjects, does not show up in the menu for other Participating Researchers, and appears at the bottom of the Experiment menu for the Owner.
- 4) Distinct Name: The name of the Experiment, which must be a unique name among the Experiments for which you are the Owner.
- 5) Passphrase: The security password for the current Experiment. When you give access to Subjects to run the Experiment in the DPTE Player, the Subject will normally be required to enter this string in order to run the Experiment. Length must be at least 6 characters and can be as long as 20 characters.
- 6) Description: A short description of the Experiment, for the Researcher's reference only. Keep it brief here, and use the Experiment Dashboard's *Notes* section for any detailed analysis.
- 7) Participating Researchers: This grid lists all the Researchers who have access to the current Experiment, and shows the Role each Participating Researcher has in the Experiment. Researchers may have access to an Experiment under any of the following three roles: Owner, Co-Investigator, or Participant.

The Researcher who creates an Experiment is assigned as the Owner of the Experiment. An Owner may make changes to any area of the Experiment. This user can create, modify or delete entities under this Experiment. An Owner may also Delete or Duplicate the Experiment. An Experiment has only one Owner.

A Researcher who is assigned as a Co-Investigator can also make changes to the Experiment. This user can create, modify or delete entities under this Experiment. However, a Co-Investigator may not Delete or Duplicate the Experiment. An Experiment can have multiple Co-Investigators.

A Researcher who is assigned as a Participant in an Experiment may only view the Experiment. A Participant does not have access to make changes to the Experiment. An Experiment may have multiple Participants.

- 8) Researcher and Role menus: These are used in conjunction with the Add and Remove buttons (see 9. Add/Remove Researcher). The Researcher menu lists all of the Researchers registered for DPTE who are *not* Participating Researchers for the current Experiment. By selecting a Researcher, then selecting the preferred Role (Co-investigator or Participant), a Researcher can be added to the Experiment and have the rights for that Role. The Owner of an Experiment can also select “Owner” when adding a Researcher, and thereby transfer ownership of the Experiment to a different Researcher.
- 9) Add/Remove Researcher: A Researcher, selected in the Researcher menu, is added to the Experiment using the Add button; that Researcher will have the Role specified by the Role menu. To remove a Researcher from an Experiment, select that Researcher's row in the Participating Researchers grid and click the remove button below the grid.

Note that to change the Role of a Researcher in an Experiment, you must Remove and then Add the Researcher back with the new desired Role. Note also that you can remove yourself from an Experiment if you are a Co-investigator or Participant. The Owner can transfer ownership as mentioned in 8) Researcher and Role menus.

- 10) New button: To create a new Experiment, click the New button. The new Experiment will become the currently active Experiment and you will be designated as the Owner of the Experiment. The new Experiment will be given a system-generated unique name (such as “Experiment 1492”). You can change this to a more meaningful name by changing the text in the Distinct Name field and clicking Save at the bottom of the screen.
- 11) Delete button: To delete an Experiment click the Delete button. You must be the Owner to delete an Experiment; the software will ask you for confirmation via a pop-up window. If you confirm deletion, the Experiment will be deleted from the DPTE system. Note that if you delete an Experiment, all collected Experiment Results (Recorded Events and Subject Variables) for that Experiment will be deleted or at the very least, inaccessible via the Researcher Interface.

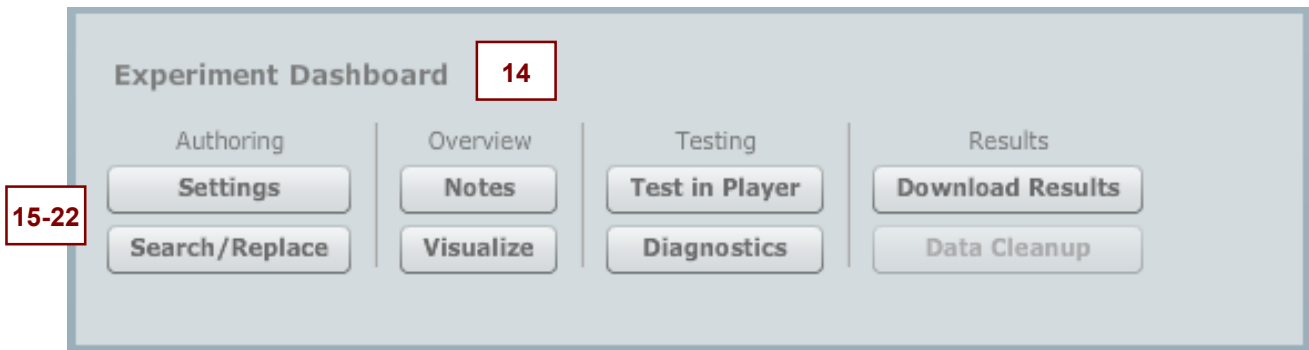
12) Duplicate button: This button allows the Owner of the current Experiment to make a duplicate of it. A brand new Experiment is created that is a copy of the original but is not linked to the original in any way; that is, all of the Stimulus Items, Alternatives, etc, are also duplicated and reside within the environment of the new Experiment. The newly-duplicated Experiment's name is, by default, the original Experiment's name with the text "[copy]" appended to it.

Note that the Duplicate button is not active until a Researcher is selected in the Participating Researchers dialog; this Researcher will be the Owner of the newly-duplicated Experiment. The original Experiment remains unchanged.

13) Save/cancel: Used to save changes or to cancel them. If you change any Experiment data (such as the Distinct Name or Description) you must save or cancel before you can switch to a different Experiment. Note that because the Researcher information (see Your Information below) is contained on the same page, any changes to that information will be saved/canceled with these buttons as well.

Also note that some actions (such as Duplicate, or Add/Remove Researcher) cannot be performed if there are pending changes that must be saved or cancelled.

Experiment Dashboard

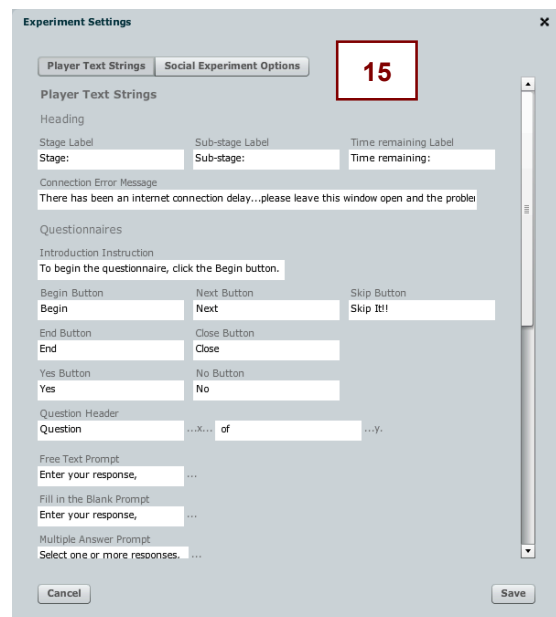


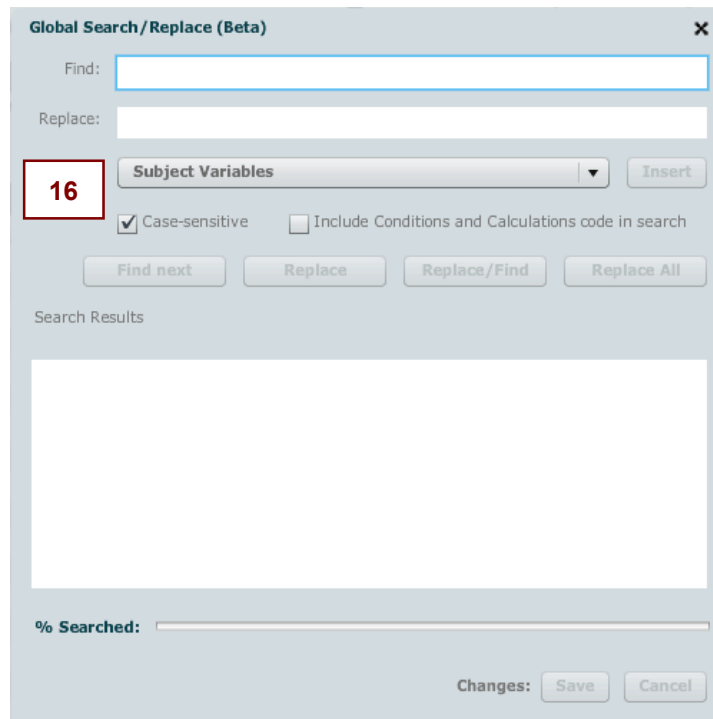
- 14) Experiment Dashboard overview: The Experiment Dashboard contains functions relevant to the overall Experiment, through all phases of Experiment development.

Authoring functions change the actual content of the Experiment;
Overview functions are used to provide context and documentation;
Testing functions are for debugging Experiment content;
Results functions are for managing the output of an Experiment

- 15) Settings: Opens the Experiment Settings screen, in which all the text used in the Player can be set or changed. This allows the Researcher to customize the Player as s/he wishes, and is a way to provide for Subjects who speak a language other than English. Changes are stored on a per-Experiment basis, so changes will have to be made for each Experiment in which they are needed (or Duplicate an Experiment where these settings have been changed as needed).

Most of the Player Text Strings section provides options relevant to Questions and Questionnaires; the Social Experiment Options are covered in detail in Section Three of the documentation.





- 16) Search/Replace: The Global Search/Replace allows the Researcher to find and replace text throughout the Experiment. Areas searched include:
- Stimulus Items (Headline, Synopsis, and Main Text)
 - Announcement text
 - Questionnaire intro text
 - Question text

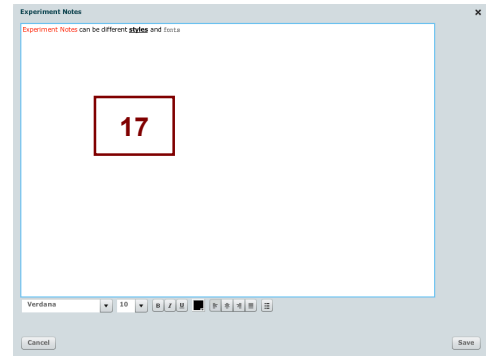
The following are searched if the box “Include Conditions and Calculations code in search” is checked:

- Calculation formulas
- Branch conditions
- Questionnaire/Question conditions
- Stage-Substage-Group conditions (Before, After, Timed, Flow, and Follow-on)
- Stage Alternative conditions

The Search/Replace dialog can be particularly helpful when there is a problem with Subject Variable names that have been changed (for example, you used a Subject Variable in a Condition and then renamed a Questionnaire). By keeping the brackets in the Search and Replace terms, you can find the incorrect Subject Variable and replace it with the correct term. See the online FAQ for more information.

17) Notes: The Experiment Notes window is intended to provide a larger area for description and documentation of the Experiment.

Unlike the Description box (see #6), the Notes can be edited by Co-Investigators as well as the Owner, and styled text, color, etc. can be applied.



18) Visualize: The Visualization feature creates an Excel file representing the structure of your Experiment. The file is created and a link is returned to download the Excel file for your use.

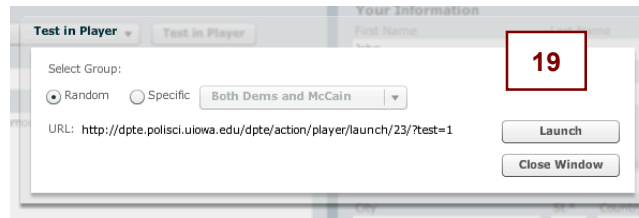
The main page of the Visualization file (Experiment Information) contains a matrix layout with Groups across the top and Stages and Sub-stages going down; at each Group-Substage nexus, the Items present for that Sub-stage Phase are listed. So for a given Group column, you can scan down the Stages, find a Sub-stage, and look at a particular Phase (Before Items, for example) and see all the Items at that Phase.

The Group/Stage/Substage that you are currently viewing in the Researcher Interface is highlighted in yellow, in order to denote "where you are" in the Experiment. The Experiment Information sheet is very useful for determining at a glance where the real "action" is in an Experiment.

The 2nd sheet of the Visualization is a listing of all the Branches in the Experiment and their destination. You can click on a Branch and Excel will take you to the Branch's location (Stage/Substage/Group) on the Experiment Information sheet.

The third Excel sheet lists all of the Questionnaires defined in the Experiment (across the top) and the Questions contained in each one.

- 19) Test in Player: The Test in Player button is used to test the current Experiment in the DPTE Player. Clicking this button displays a window as shown below



You have the option to select a specific group for the test; leave the selection "random" if you wish the group determination to be made by the Experiment (see Groups for Group Subject Assignment explanation).

The URL is displayed and is selectable so that it can be cut and pasted for future reference.

- 20) Diagnostics: This feature is used to double check areas of the Experiment under development to insure that certain common pitfalls are avoided.

Required Elements - checks that the Experiment has a Group, Stage, and a Substage

Stages & Substage - Checks for correct Stage/Substage linkage

Specific Alternatives and Attributes: Checks Stimulus Items with a specific Alternative or Attribute to ensure that the value isn't null

Stage Alternatives: Checks Stimulus Items with specific Alternatives; makes sure that Alternative is part of the Stage. This is unchecked by default as it can be time-intensive.

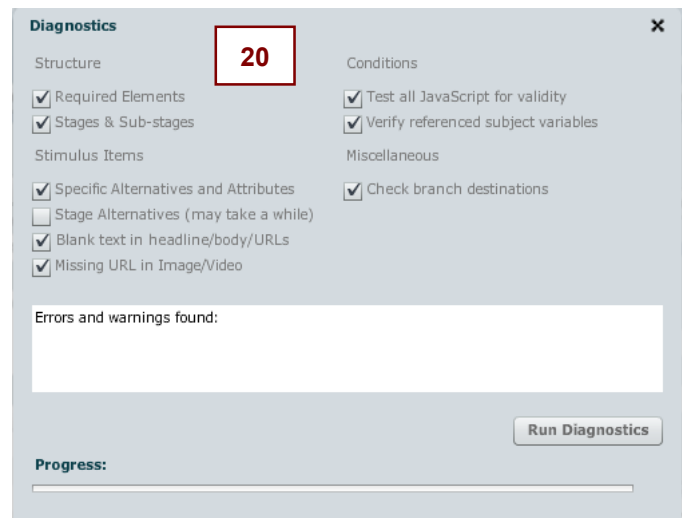
Blank Text In Headline/Body/URLs: Checks Stimulus Items for blank text fields.

Missing URL in Image/Video: For Image and Video Stimulus Items, checks for blank URLs.

Test All JavaScript for Validity: Checks all Conditions for proper JavaScript

Verify Referenced Subject Variables: Makes sure that any Subject Variable referenced in the Experiment exists.

Check Branch Destinations: Makes sure that Branches do not have an invalid destination, that is, a proper Stage, Substage, and Group selection has been made.



21) Download Results: This button allows access to the Results of an Experiment, consisting of the Recorded Events and Subject Variables stored for that Experiment. See Part One for more information on what the Player stores when an Experiment is executed.

A dialog is presented in which the Researcher chooses the format of the data and can specify a date range; all Experiment data within that date range is downloaded. [Note that there is sometimes a problem with a single-day date range. If you want data for a single day, choose the day AFTER that date as the end date.]

If Recorded Events download is chosen, a .zip file is created and made available to download; this contains a folder which in turn contains two files, one for the Recorded Events and another for Subject Variables, each in comma-separated value (CSV) format.

If Rectangular Data Set download type is chosen, then an email is sent when the Rectangular Data Set has been generated. The email contains a link to a downloadable .zip file. For larger Experiments, generation of the Rectangular Data Set may take several hours.

22) Data Cleanup: Provides a dialog that allows the Owner of an Experiment to delete a portion of the generated Recorded Events for the current Experiment. Options include deleting incomplete Subjects, deleting only "test" data and/or deleting all data in a certain time range.

Download Results 21 ✕

Data request:
 Recorded Events Rectangular Data Set

Subject types:
 Completed Subjects Only All Subjects

Data types:
 Exclude Test Data Include All Data

Date range:
From:
To:

If no dates are selected, the maximum time range is used.
Experiment data is recorded in the Central (U.S.) Timezone (CST/CDT).

Data Cleanup ✕

Choose the type(s) of data you would like to remove. By default data cleanup will remove data for incomplete Subjects and all test data; to change this use the options below.

Remove Recorded Events and Subject Variables for:

Subject types to remove:
 Non-completed only Both non-completed and completed

Type of data to remove
 Test data only Both test and "actual" data 22

Date range:
From:
To:

If no dates are selected, the maximum time range is used.
Experiment data is recorded in the Central (U.S.) Timezone (CST/CDT).

Your Information

Dynamic Process Tracing Environment v1.188 Help Logout

Experiment: Short Election Demo Owner: Steve Bowers Your role: Co-Investigator Experiment Setup

Alternatives Attributes Stages Groups Stimuli Questionnaires Announcements Branches Calculations

Experiment Dashboard

Modify Settings Run Diagnostics Test in Player Download Results Visualize

Your Information

First Name* Last Name*

Derek Seibert

Email Address* Phone

derek-seibert@uiowa.edu 1234

Title

dev

Department* Organization*

UI UI

City* State* Country

Iowa City IA USA

Describe Your Requested Use of DPTe

test2

*These fields cannot be left blank

Your Information: Save Cancel

First	Last	Organization	Role
Steve	Bowers	University of Iowa	Owner
David	Redlausk	Rutgers University	Co-Investigator
Nicholas	Martini	University of Iowa	Co-Investigator
Andrew	Rinner	University of Iowa	Co-Investigator
Benton	McCune	University of Iowa	Participant
Derek	Seibert	UI	Co-Investigator
Saoun	Kim	University of Iowa	Co-Investigator
Hokara	Bush	University of Iowa	Co-Investigator
Vani	Murarka	uiowa	Co-Investigator

To remove a researcher, click to select the researcher, then click the Remove button.

Researcher Role

Acar, Yasamin, Claremont Grad Co-Investigator Add

Experiment: New Delete Duplicate Save Cancel

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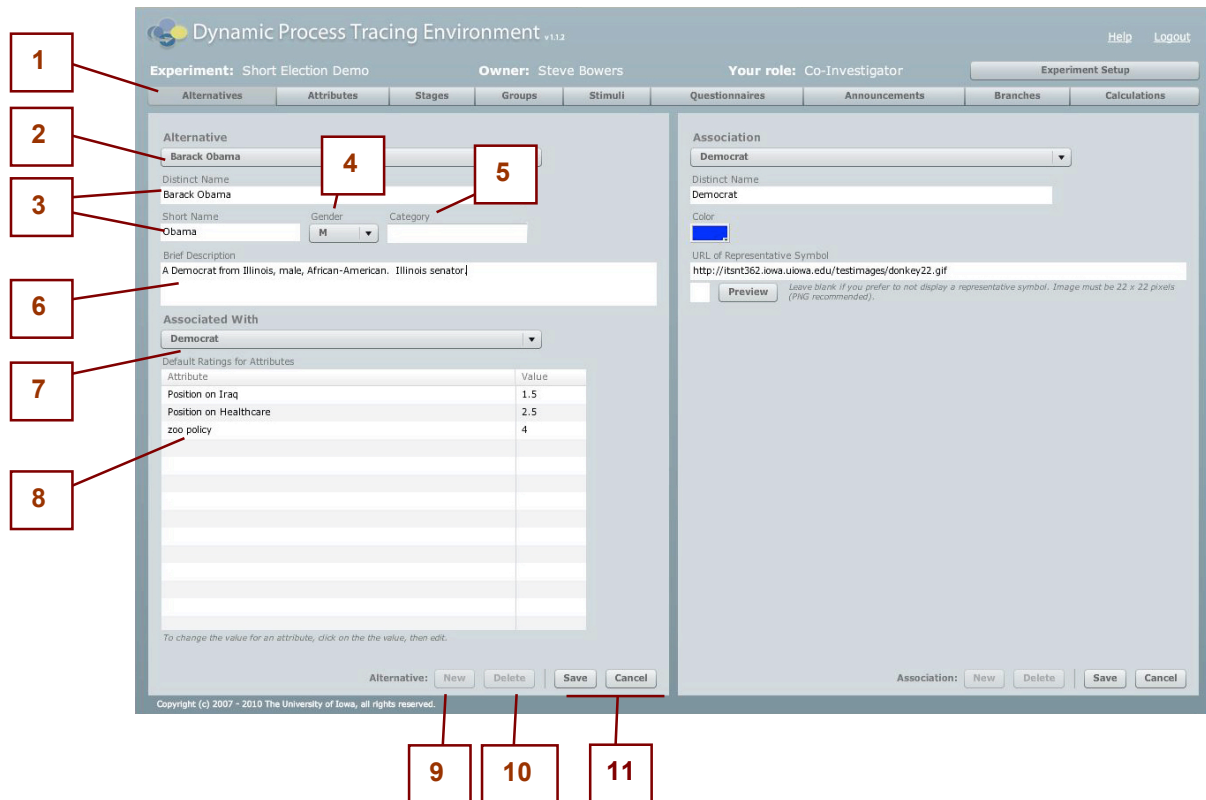
The right-side panel of the Experiment Setup screen contains the personal information of the currently logged-in Researcher. If you are logged in, it shows all the information that you used when you initially filled out the web form to request a Researcher ID in the system. This information includes your first and last name, email address, and phone number, as well as your title, department, organization, and address. You are able to modify this information, but there is rarely a reason to do so. You can use the buttons at the bottom to save or cancel any changes you make.

Other than you, only the DPTe Administrators will see this information, and they may contact you if there are changes to the system that you need to be aware of. Therefore it is important that you keep the information current and do not delete your name, email, phone number, etc. or you may be mistaken for an inactive account and deleted. We will not use your information in any manner that is generally recognized as inconsiderate.

If you edit any of the fields denoted by an asterisk—first or last name, email address, or organization—they must not be left blank, or the values will be reverted to their previous values on Save.

Alternatives screen (Alternatives)

This section explains the Alternatives screen, which allows the researcher to define Alternatives and Associations. The left side of the screen is for the specification of Alternatives.



- 1) Alternative tab: used to select the Alternatives screen.
- 2) Alternative menu: Use this menu to switch between the Alternatives you have created.
- 3) Distinct Name and Short Name: The "long" and "short" name of the Alternative. The distinct name is used as the "long" form of the Alternative name in the Experiment, and must be unique within the Experiment.

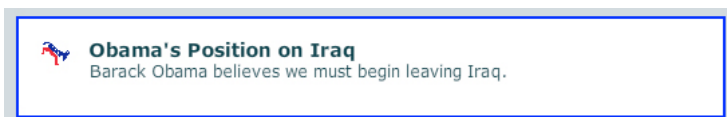


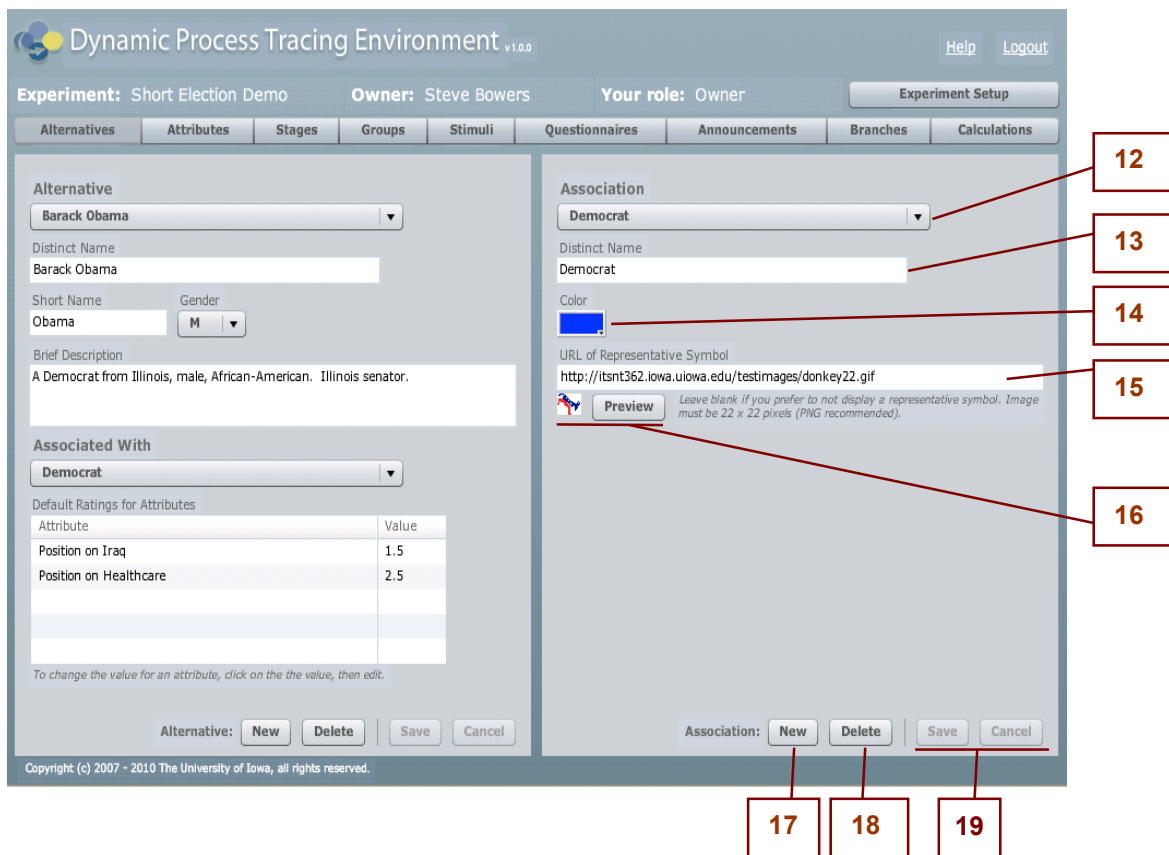
Figure 2: the short name (Obama, in title) and distinct name (Barack Obama, in synopsis below it) as seen in a Flow Item in the DPTE Player.

If the Alternative is known by a shorter name, it is specified in Short Name. If there is no

short name, it is recommended that the full name be entered again rather than leaving Short Name blank. This is because both Distinct Name and Short Name can be used in the headlines and texts of Stimulus Items for dynamic rendition in the DPTE Player (as shown in figure 2 above).

- 4) Gender: The Researcher can specify the gender of the alternative – male, female or neuter. This value can be used to determine the results of dynamic pronoun insertions in the headlines and texts of Stimulus Items in the DPTE Player. Using tags, the correct pronoun can be dynamically inserted by Researcher specification based on the Gender trait of the Alternative (see Stimulus Items Screen for explanation of text insertion tags/codes).
- 5) Category: This field is used only as an aid to the Researcher; it does not affect the Experiment in any way. Type the Category (any name) that you wish to "tag" this Alternative with; in the Experiment Results, the Category for an Alternative is part of any Recorded Event in which this Alternative is used, and can be useful for sorting and grouping Alternatives that are related.
- 6) Brief Description: A description of the Alternative. For the researcher's reference only.
- 7) Associated With: This menu links this Alternative to an Association. Changing the value of this menu will cause the selected Association to become selected on the right side of the screen, where Associations can be edited. See Alternatives Screen (Associations).
- 8) Default Rating For Attribute: This grid displays each Attribute (see Attributes Screen) and the current Alternative's rating with regard to the Attribute. The values are editable by clicking on the rating column, while the Attribute names are editable on the Attributes Screen. The rating can be any value between 0 and 7, significant to two decimal places (e.g. 3.25). The default rating value is 4.
- 9) New button: Used to create a new Alternative. A new Alternative gets created with a default name (such as "Alternative 562"). You can change the name to a more meaningful one in the Distinct Name field. You will have to Save or Cancel any changes before you are able to create a new Alternative.
- 10) Delete button: Used to delete an Alternative. Note that deleting an Alternative that is the designated Alternative of a Stimulus Item will affect how that Stimulus Item is displayed. You must Save or Cancel any changes before you are able to delete an Alternative.
- 11) Save/Cancel: Used to save changes or to cancel your changes. Note that if you used the Alternative menu to switch between Alternatives, the save or cancel applies to any Alternatives you have edited.

Alternatives screen (Associations)



- 12) Association menu: Use this menu to switch between the Associations you have created.
- 13) Distinct Name: The name of the Association.
- 14) Color: The color representative of the Association, if any. Click inside the color rectangle to get a menu of colors to select from (as shown in Fig. 3)

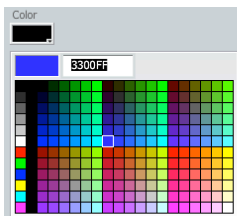


Figure 3

In the player, Stimulus items show up with a border of the selected color, if the stimulus' relevant Alternative belongs to an Association (as shown in Fig 4, note the blue border). If you want no color to be specified, you can select white.

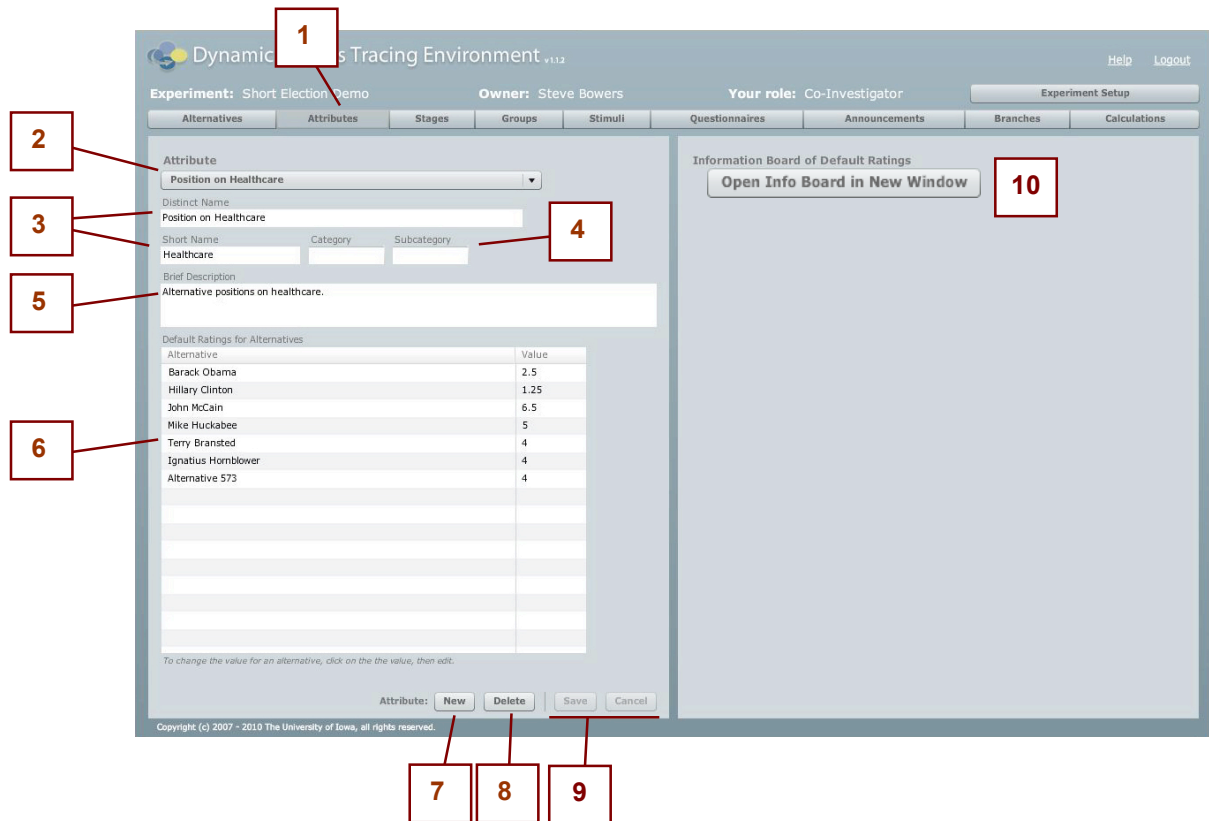


Figure 4: the Association border and symbol as seen in a Flow Item in the DPTE Player.

- 15) URL of Representative Symbol: Type the complete URL of the image to be used as the Symbol of the Association, if any. This image must be in PNG, GIF or JPG format and must be hosted on a server or it will not appear in Preview (15) or show up in the DPTE Player. If the Symbol is larger than 40x40 pixels it will be reduced to fit that size. The Symbol will be displayed in relevant Flow Items in the DPTE Player (as shown in Fig. 4). If left blank, no Symbol will be used and the Headline and Synopsis text will not be indented.
- 16) Preview button: Used to check if the given URL is correct and whether the system is able to retrieve it. If successful, the image will be displayed to the left of the Preview button.
- 17) New button: Used to create a new Association. A new Association gets created with a default name (such as "Association 370"). You can change the name to a more meaningful one in the Distinct Name field, but it must be unique within the Experiment. You will have to Save or Cancel any changes before you are able to create a new Association.
- 18) Delete button: Used to delete an Association. Note that deleting an Association will set the Alternative's Association to "None" for any Alternatives that had this Association designated. It will also affect how any Stimulus Items linked to these Alternatives are displayed. You must Save or Cancel any changes before you are able to delete an Association.
- 19) Save/Cancel: Used to save changes or to cancel them. This will save or cancel changes for any Alternatives you have worked on, i.e., if you have made changed to one Alternative, switched to another, edited it, and hit Save or Cancel, your changes to both will be saved or canceled.

Attributes screen

This section explains the Attributes screen, which allows the Researcher to define Attributes and the ratings of an Attribute for all the Alternatives of the Experiment. The right side of the screen is for the Information Board of Default Ratings, also covered below.



- 1) Attributes tab: used to select this screen.
- 2) Attribute menu: Use this menu to switch between the Attributes you have created. The other information on the screen will reflect the new selection.
- 3) Distinct Name and Short Name: The "long" and "short" name of the Attribute. The long name is used to refer to the Attribute in other sections of the Researcher interface; the short name is not currently used but may be in the future.
- 4) Category and Subcategory: These fields are used only as aids to the Researcher; they do not affect the Experiment in any way. Use any names that you wish to "tag" this Attribute with; in the Experiment Results, the Category and Subcategory for an Alternative become part of any Recorded Event in which this Attribute is used, and can be useful for sorting and grouping Attributes that are related.

- 5) Brief Description: A description of the Attribute, for the researcher's reference only.
- 6) Default Ratings for Alternatives: This grid displays each Alternative (see Alternatives screen) and the Alternative's rating with regard to the current Attribute. The values are editable by clicking on the rating column, while the Alternative names are editable on the Alternatives screen. The rating can be any value between 0 and 7, significant to two decimal places (e.g. 3.25). The default rating value is 4.

Often these ratings are meant to correspond to a sliding scale from most liberal to most conservative, i.e. "left" to "right" but can have any meaning the researcher wants depending on the type of experiment being conducted.

- 7) New button: Used to create a new Attribute. A new Attribute is created with a default unique name (such as "Attribute 562"). You can change the name to a more meaningful one in the Distinct Name field but it must remain unique within this Experiment. You will have to Save or Cancel any changes you have made to the current Attribute before you are able to create a new Attribute.
- 8) Delete button: Used to delete an Attribute. You must Save or Cancel any changes before you are able to delete an Attribute.
- 9) Save/Cancel: Used to save changes or to cancel current changes. This applies to any changes made to all Attributes that have been modified, not just the current Attribute. That is, if you modify an Attribute, switch to another one, edit it, and Save or Cancel changes, the changes to both Attributes are saved or canceled.
- 10) Information Board of Default Ratings: This feature opens an external window containing the ratings matrix for Alternatives and Attributes, as shown in the sample below.

Experiment: Short Election Demo

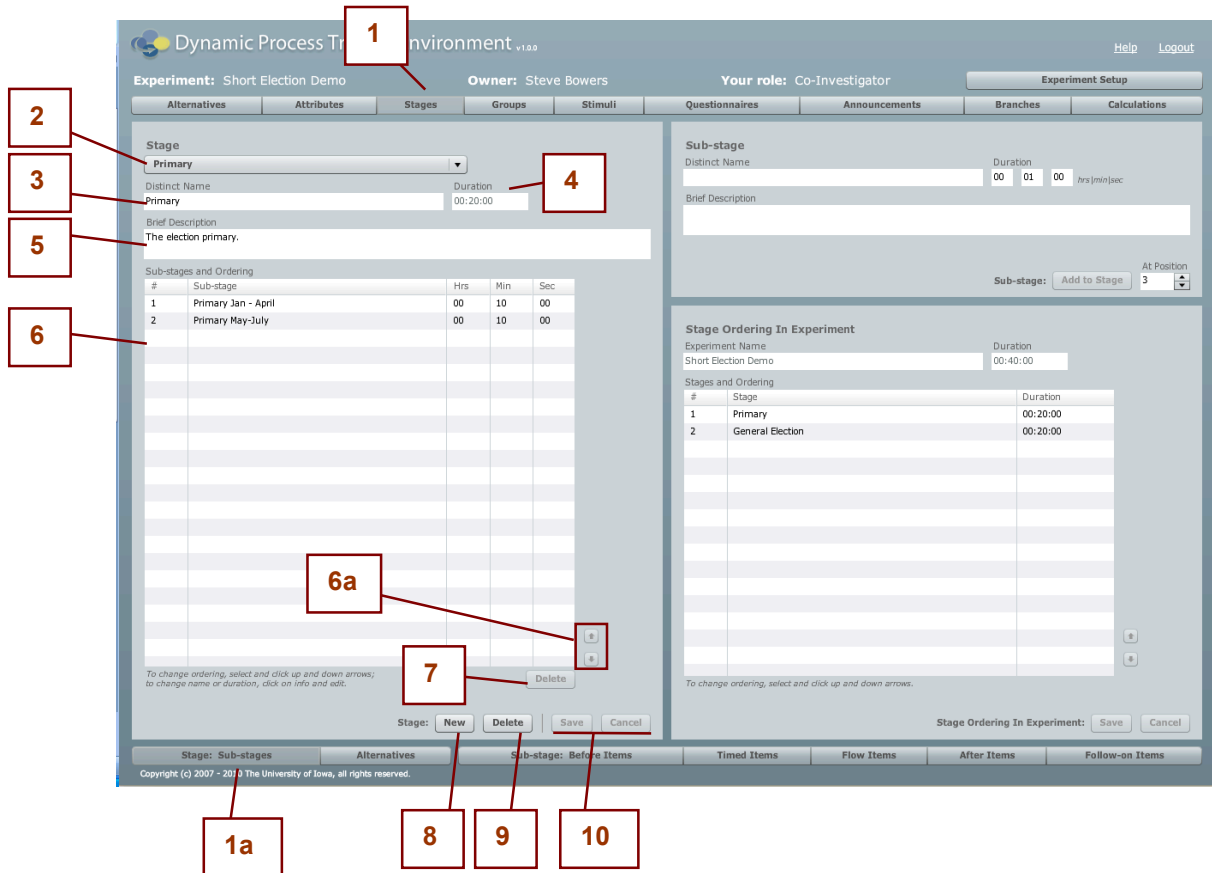
Alternatives: 4

Attributes: 2

	Barack Obama	Hillary Clinton	John McCain	Mike Huckabee
Position on Iraq	1.5	3.5	7.0	5.5
Position on Healthcare	2.5	1.25	6.5	5.0

Stage: Sub-stages screen

This section explains the Stage: Sub-stages screen, which allows the researcher to define Stages and Sub-stages, and the ordering of Stages within the Experiment and Sub-stages within a Stage.



- 1) & 1a) Stages and Sub-stages tabs: used to select this screen. The Stages menu in the upper tab-bar will reveal the lower tab-bar; the "Stage: Sub-stages" menu is the first on the left.
- 2) Stage menu: Use this menu to switch between the Stages you have created; all information on the rest of this screen applies to the currently selected Stage.
- 3) Distinct Name: The name of the Stage; this must be unique within the current Experiment.
- 4) Duration (and Show Time Remaining checkbox)

The Duration of the Stage is the sum of the Durations of all the Sub-stages defined under that Stage. This is an informational field only and cannot be edited. Since this figure is based on the values entered for the Sub-stages, you must edit the Sub-stage values to see a change in the Duration field. See #6 below and #12 in the Sub-stage area for information on how to change the Duration of a Sub-stage.

Show Time Remaining check box: when checked, the Time Remaining will be displayed in the Player for the Stage and Substage. When unchecked, these values will not be displayed. Note that this option is available on a Stage by Stage basis, but controls both the Stage and Substage Time Remaining.

- 5) Brief Description: A description of the Stage. For the researcher's reference only.
- 6) Sub-stages: A list of all the Sub-stages that belong to the Stage. To change the name or the Duration of a Sub-stage click on the appropriate value in the grid and edit. The order of the Sub-stage within the Stage may be changed by using the up and down arrows [6a] after first selecting a Sub-stage. The order of the Sub-stages determines the order they will be presented in the DPTE Player (unless the use of a Branch jumps the Subject to a different Sub-stage).
- 7) Delete Substage button: Used to delete a Sub-stage. You must first select the Sub-stage in the Sub-stages and Ordering grid. Deleting a Sub-stage removes all information associated with that Sub-stage, but any Stimulus Items, Questionnaires, etc, still exist and can be used in other Sub-stages. Sub-stages will be displayed in the DPTE Player in the order they are listed here, unless the order is changed by the use of Branches.
- 8) New button: Used to create a new Stage.
- 9) Delete button (Stage): Used to delete a Stage. Note: deleting a Stage will delete all Sub-stages that belong to it. Be careful that when you want to delete a Sub-stage that you are not in fact deleting a Stage! A warning message will appear to confirm that you want to delete the entire Stage.
- 10) Save/Cancel: Used to save changes or to cancel your changes to the Stage settings. Note that the Save or cancel applies to all Stages you might have edited.

Stage: Sub-stages screen - Sub-stage area

The screenshot shows a form titled "Sub-stage" with the following components:

- 11**: "Sub-stage" header.
- 11**: "Distinct Name" text input field.
- 12**: "Duration" input field showing "00 01 00 hrs|min|sec".
- 13**: "Brief Description" text area.
- 15**: "Add to Stage" button.
- 14**: "At Position" dropdown menu showing "3".

This part of the screen is used to create Sub-stages which are added to the currently selected Stage. Note: controls in this part of the screen are enabled only when you have created at least one Stage—otherwise there is no Stage to attach the Sub-stage to.

- 11) Distinct Name: The name of the Sub-stage to be created; must be unique to the Experiment.
- 12) Duration: The duration of the Sub-stage in hours:minutes:seconds. The maximum Duration for a Sub-stage is 99 hours, 59 minutes, and 59 seconds. This value is set by the Researcher as an **estimate** of how much time is needed for a Sub-stage; the actual duration of the Sub-stage is affected by several other factors, such as the Pace of the Sub-stage for a given Group, and the number of Flow Items in a Sub-stage/Group combo, and Timed Item usage. See the Sub-stage: Flow Items screen for more information, and/or see Section One, Part B, Sub-stage:Flow Phase.
- 13) Brief Description: A short description of the Sub-stage, for the researcher's reference only.
- 14) Position: The position (ordering) that the new Sub-stage should have in the current Stage. Sub-stages are presented in the order that they appear in the Sub-stages and Ordering grid.
- 15) Add to Stage button: Used to create a new Sub-stage and add it to the current Stage. This button is enabled only after you enter some text in the Distinct Name field. Once created, the name and Duration of the Sub-stage can be edited in the Sub-stage and Ordering grid.

Stage: Sub-stages screen - Stage Ordering in Experiment area

Dynamic Process Tracing Environment v1.0.0 Help Logout

Experiment: Short Election Demo Owner: Steve Bowers Your role: Co-Investigator Experiment Setup

Alternatives Attributes Stages Groups Stimuli Questionnaires Announcements Branches Calculations

Stage: Primary

Distinct Name: Primary Duration: 00:20:00

Brief Description: The election primary.

Sub-stages and Ordering

#	Sub-stage	Hrs	Min	Sec
1	Primary Jan - April	00	10	00
2	Primary May-July	00	10	00

Sub-stage: Primary Duration: 00:01:00 hrs/min/sec

Brief Description:

Sub-stage: Add to Stage Alt Position: 3

Stage Ordering In Experiment

Experiment Name: Short Election Demo Duration: 00:40:00

Stages and Ordering

#	Stage	Duration
1	Primary	00:20:00
2	General Election	00:20:00

To change ordering, select and click up and down arrows; to change name or duration, click on info and edit.

Stage: New Delete Save Cancel

Stage Ordering In Experiment: Save Cancel

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This section of the screen is used to specify the order of Stages within the Experiment.

16) Experiment Name: This informational (read-only) field simply shows the name of the current Experiment. To edit the Experiment name you must go to the Experiment Setup screen (you must be the Owner of the Experiment to change the name).

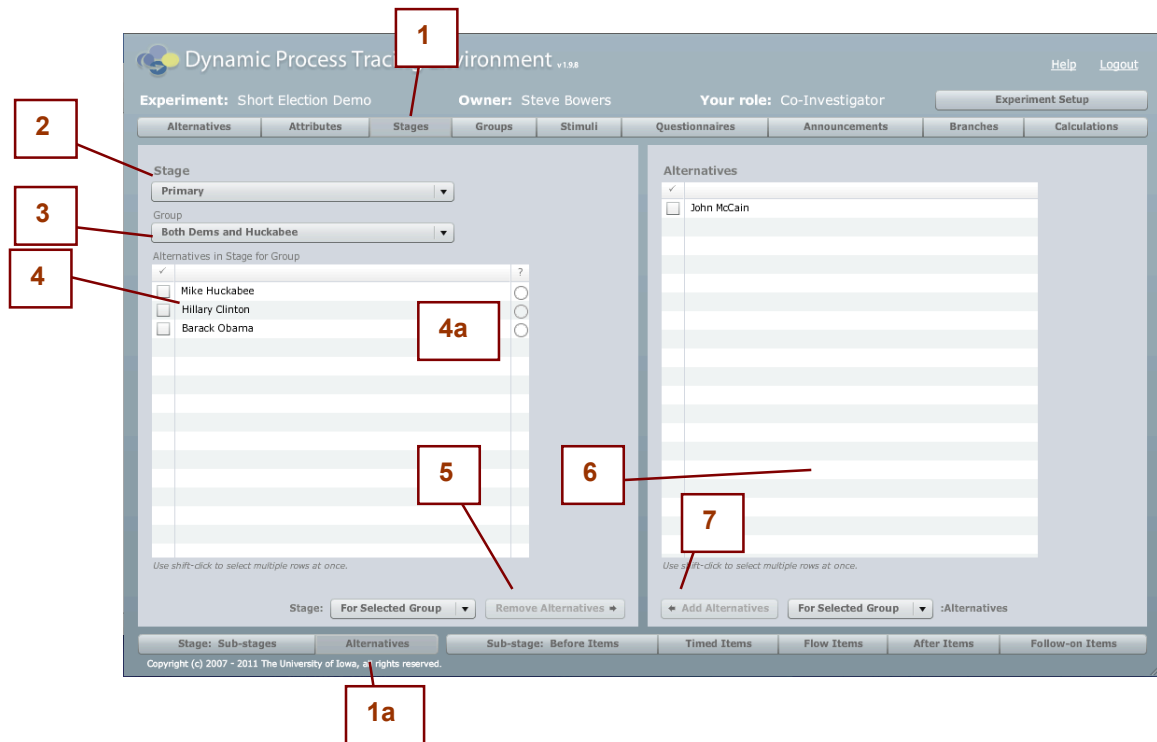
17) Duration: The total Duration of the Experiment is the sum of the Durations of all Sub-stages under all Stages defined for the Experiment. This is an information field and can not be edited. To make changes to this value, change the Duration of individual Sub-stages in the left side of the screen, in the Sub-stages and Ordering grid. See the Sub-stage: Flow Items screen for more information on Duration and how it relates to the actual duration of an Experiment (or see Section One, Part B, Sub-stage:Flow Phase)

18) Stage Ordering: The grid lists the Stages defined for the Experiment along with the Duration of each Stage (which is the sum of its Sub-stage's Durations). To change the ordering of the Stages, select a Stage in the grid and re-order by using the up-down arrow buttons.

19) Save/Cancel: Used to save or cancel your changes to the Stage ordering.

Stage: Alternatives screen

This section explains the Stage: Alternatives screen, which allows the researcher to define the Alternatives that will be relevant for different Stage-Groups.



- 1) & 1a) Stages and Alternatives tabs: used to select this screen. Selecting the Stages tab in the top tab bar reveals the lower tab bar, which allows you to choose the particular Stage-related screen.
- 2) Stage menu: Use this menu to switch between the Stages you have created for this Experiment. The selected Stage is propagated through all Stages screens, that is, all screens on the lower tab bar.
- 3) Group menu: Use this menu to switch between the Groups you have created for this Experiment. The selected Group is propagated through all Stages screens, that is, all screens on the lower tab bar. Between the Stage and Group menu you are specifying a certain Group within a certain Stage, to which you will add or remove Alternatives.
- 4) Alternatives in Stage for Group grid: This grid lists the Alternatives that are currently assigned to the selected Stage-Group pairing. Select Alternatives by clicking the checkbox. Multiple selections can be made.
- 4a) Conditions: Click the oval in the "?" column to access the Condition for the particular Stage Alternative. At runtime, when this Condition is not met, the Alternative will not be

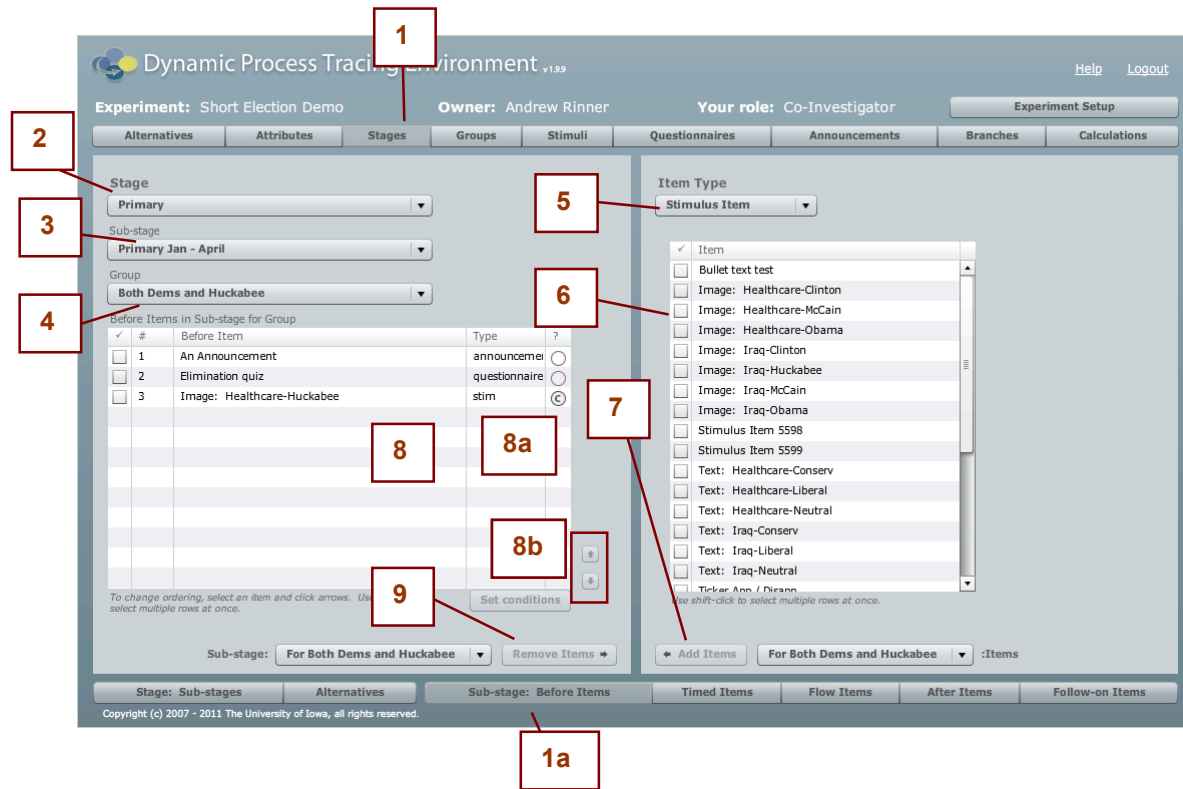
added to the Stage/Group, despite its presence in this list. When this is the case—when an Alternative is excluded from the Stage—any Stimulus Items that are Specifically assigned to that Alternative are excluded from the Stage-Group. So if you have put Stimulus Items in a certain Sub-stage/Group and they don't show up when you run the Experiment, this is a good place to look.

When an Alternative has a Condition, the oval will have a "C" inside it, and hovering over the oval with the mouse will reveal its contents; otherwise, the Condition field is empty and no test will be made (i.e., the Alternative is included in the Stage-Group).

- 5) Remove Alternatives button: Use this button to remove Alternatives from the selected Stage. First select the Alternatives in the Alternatives in Stage for Group grid. The For Selected Group menu to the left is used to specify whether selected Alternatives should be removed only from the currently selected Group, from all Groups for this Stage ("For All Groups" option) or for certain Groups ("For Certain Groups"). This enables you to remove Alternatives from many or all Groups of the selected Stage in one step, rather than selecting each Group individually.
- 6) Alternatives grid: This is the list of all Alternatives defined in the Experiment that have NOT been added to the selected Stage-Group. Select (by clicking the checkbox) one or more Alternatives in this list, then use the Add Alternatives button to add them.
- 7) Add Alternatives: This button adds the selected Alternatives (from the Alternatives grid) to the selected Stage-Group. Selected Alternatives will be added to the Alternatives in Stage for Group grid and will therefore no longer show up in the Alternatives grid after the operation. The adjacent For Selected Group menu is used to specify whether selected Alternatives should be added only to the currently selected Stage-Group, to all Groups in selected Stage ("For All Groups" option), or certain Groups ("For Certain Groups"). This enables you to add Alternatives to many or all Groups of a Stage in one step, rather than selecting each Group individually for a Stage.

Before Items screen

This section explains the Before Items screen, which allows the researcher to define the Before Items for each Sub-Stage and Group.



- 1) & 1a) Stage and Before Items tabs: used to select this screen.
- 2) Stage menu: Use this menu to switch between the Stages you have created in this Experiment.
- 3) Sub-Stage menu: Use this menu to switch between the Sub-stages you have created for the currently selected Stage. If you want to select a Sub-stage in a Stage different from the currently selected one, first change your selection in the Stage menu.
- 4) Group menu: Use this menu to switch between the Groups you have created. Taken together, the three menus (Stage, Sub-stage, and Group) define a particular Sub-stage/Group combo to which you can add and remove Items.
- 5) Item Type menu: Use this menu to switch between the different types of Items available to be added as Before Items. All Item types can be added as Before Items.
- 6) Item grid: This is the list of all Items of the selected Item Type that have NOT been added to

current Sub-stage/Group combo. Hence, if you have Stimulus Item selected, this grid will list all Stimulus Items defined in the Experiment that are not already included in the selected Sub-stage/Group combo as Before Items.

- 7) Add Items button: This button is used to add the Items selected in the Item grid to the current Sub-stage/Group combo. Use the adjacent menu to specify which Groups the Items should be added to. This enables you to add Items to all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.
- 8) Before Items in Sub-stage for Group grid (aka, Before Items grid): This is the list of all Items that are configured as Before Items for the current Sub-Stage/Group combo.

8a) The column on the right is the Conditions column. Click the oval to access the Condition for the particular Before Item. In the Player, if this Condition is not met at run-time, the Before Item will not be presented, despite its presence in this list. When a Before Item has a Condition, the oval has a "C" inside it; otherwise, the oval is empty. You can select multiple rows and use the Set Condition button below the grid to set a Condition for multiple Before Items.

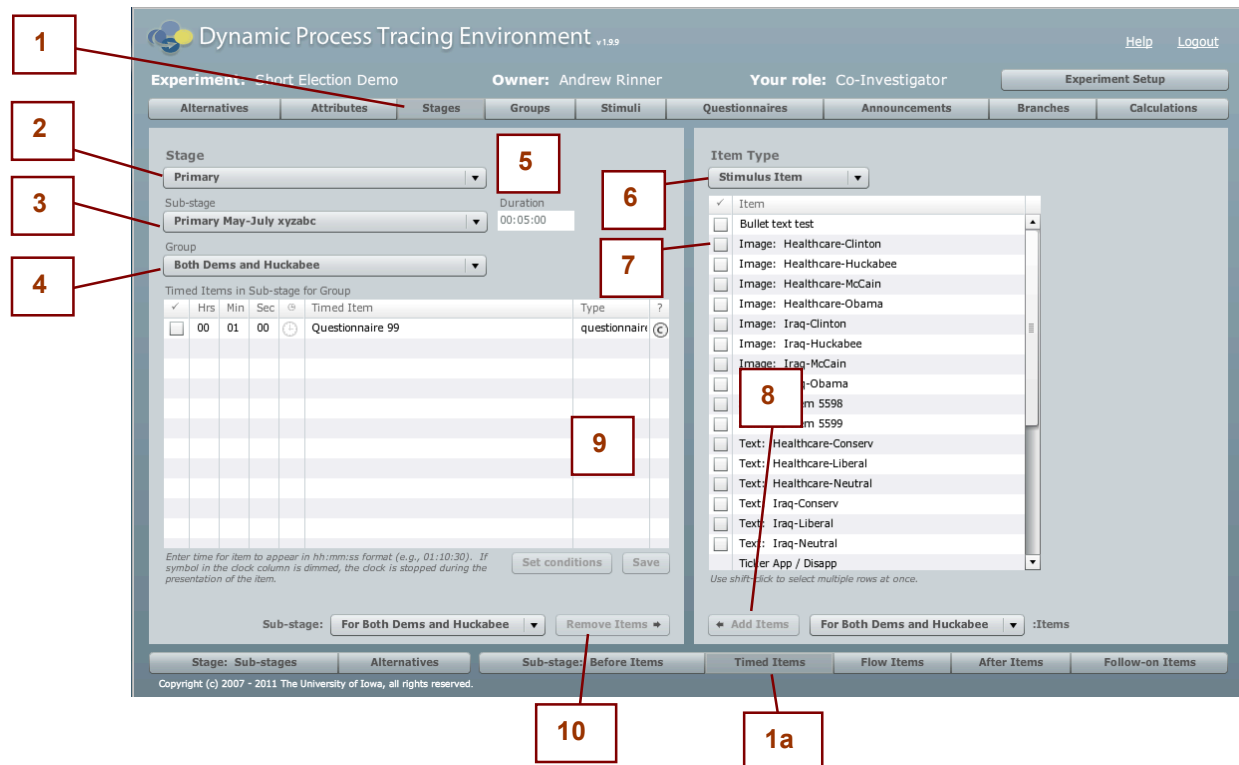
8b) To re-order the sequence of the Before Items, select an Item in the grid and use the up & down arrow keys (8a).

Note that for Social Experiments there will be an additional column in the Before Items grid. See Section Three: Social Experiments for more information.

- 9) Remove Items button: Use this button to remove Before Items selected in the Before Items grid from the current Sub-stage/Group combo. Use the adjacent menu to specify which Groups the Items should be removed from. This enables you to remove Items from all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.

Timed Items screen

This section explains the Timed Items screen, which allows the researcher to define the Timed Items for each Sub-stage and Group.



- 1) & 1a) Stage and Timed Items tab: used to select this screen.
- 2) Stage menu: Use this menu to switch between the Stages you have created.
- 3) Sub-stage menu: Use this menu to switch between the Sub-stages you have created for the currently selected Stage. If you want to select a Sub-stage in a Stage different from the currently selected one, first change your selection in the Stage menu.
- 4) Group menu: Use this menu to switch between the Groups you have created. Taken together, the three menus (Stage, Sub-stage, and Group) define a particular Sub-stage/Group combo to which you can add and remove Items.
- 5) Duration: This field shows the Researcher-defined Duration of the selected Sub-stage. It is often helpful to know the length of the Sub-stage when deciding on a time to use for Timed Items.
- 6) Item Type menu: Timed Items can be of any type. Use this menu to switch between the

different types of Items that you want to add to the current Sub-stage & Group, and the grid below it will list only Items of the selected type.

- 7) Item grid: This is the list of all Items of the selected Item Type that have NOT been added to current Sub-stage/Group. For example, if you have Questionnaire selected, this grid will list all Questionnaires defined in the Experiment that are not already assigned to the selected Sub-stage/Group as Timed Items.
- 8) Add Items button: This button is used to add Items selected in the Item grid to the current Sub-stage/Group as Timed Items. Use the adjacent menu to specify which Groups the Items should be added to. This enables you to add Items to all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.
- 9) Timed Items in Sub-stage for Group grid (aka Timed Items grid): This is the list of all Items that have been added as Timed Items for the current Sub-stage/Group. For each Timed Item, the grid shows the time of appearance within the Sub-stage in hh:mm:ss format; click on the cell to modify the hours, minutes, or seconds. By default, items are added with time set to 00:00:00. Following the time specification columns is the "clock" column: a visible clock in the column means that the DPTE clock will continue to run while the Timed Item is presented. A faded clock means the DPTE clock should stop while the item displays. Click the clock in the column to toggle the setting, and click the Save button below the grid to save changes to the grid.

Note: It is important to consider carefully the time parameters for a Timed Item. If multiple Timed Items are set to appear at the same time, the order of appearance of the Items may be essentially random, and it's even possible that some of them might not appear. Overall, it's best to give each Timed Item a unique appearance time. This is particularly true for Questionnaire Items, which must retrieve additional data from the server (and Questionnaires shouldn't appear simultaneously anyway).

Note also that it's best to turn the clock off when presenting a Questionnaire as a Timed Item. There is no way to know how long the Subject will be in the Questionnaire, and if there is a subsequent Timed Item Branch that depends on values from the Questionnaire, those values might not be present if the Branch appears before the Subject is done with the Questionnaire.

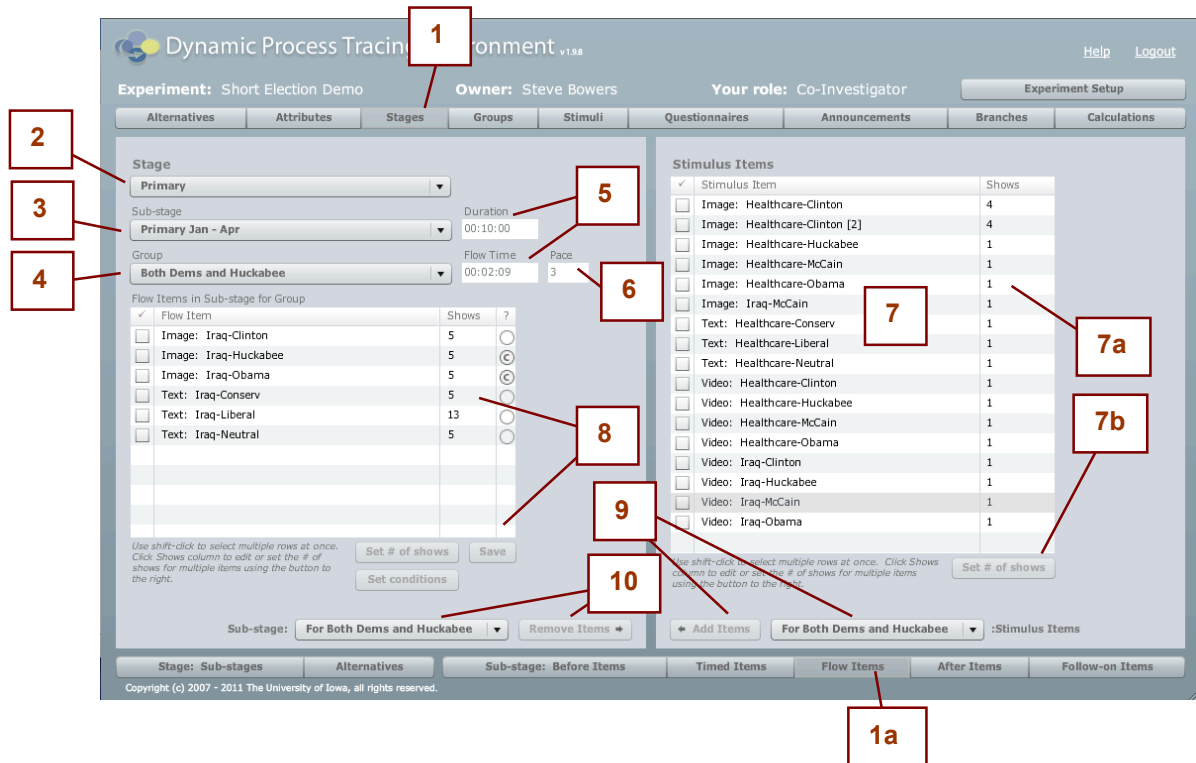
The column on the right of the Timed Items grid is the Conditions column. Click the oval to access the Condition for the particular Timed Item. In the Player, if this Condition is not met at run-time, the Before Item will not be presented, despite its presence in this list. When a Timed Item has a Condition, the oval has a "C" inside it; otherwise, the oval is empty. You can select multiple rows and use the Set Condition button below the grid to set a Condition for multiple Timed Items.

Note that for Social Experiments there will be additional columns in the Timed Items grid. See Section Three: Social Experiments for more information.

- 10) Remove Items button: Used to remove Items selected in the Timed Items grid from the current Sub-stage/Group. Use the adjacent menu to specify which Groups the Items should be removed from. This enables you to remove Items from all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.

Flow Items screen

This section explains the Flow Items screen, which allows the researcher to define the Flow Items for each Sub-stage/Group combination.



- 1) 1 & 1a) Stage tab, with Flow Items sub-tab: used to select this screen.
- 2) Stage menu: Use this menu to switch between the Stages you have created.
- 3) Sub-stage menu: Use this menu to switch between the Sub-stages you have created for the currently selected Stage. If you want to select a Sub-stage in a Stage different from the currently selected one, first change your selection in the Stage menu.
- 4) Group menu: Use this menu to switch between the Groups you have created. Taken together, the three menus (Stage, Sub-stage, and Group) define a particular Sub-stage/Group combo to which you can add and remove Items.
- 5) Duration and Flow Time: The Duration field displays the Duration that has been defined for the current Sub-stage; that is, the value that the Researcher has specified. This value is used when the Time Remaining in Stage is shown in the Player. The Flow Time field shows the actual amount of time it will take to display Flow Panels for all of the Flow Items that have been added to this Sub-stage/Group pair. These values should be fairly close—it normally does little good to have values that are far off from each other. If the Duration is much

shorter than the Flow Time, there isn't enough time for all the Flow Items to appear; if the Duration is much longer than the Flow Time, it will give an inaccurate signal to the Subject as to how long the Sub-stage lasts. Flow Time is calculated based on the number of Flow Items and the Pace of the Sub-stage/Group pair. The Duration of a Sub-stage/Group can be changed on the Groups screen.

- 6) Pace: Displays the pace setting that has been set for the select Group and Sub-stage (this is set on the Groups screen). Pace determines how fast the Flow Panels flow in the Player; a higher value means a slower Pace, as it represents the amount of seconds between movement of the Flow Items.
- 7) Stimulus Items grid: This is the list of all Stimulus Items defined in the Experiment that have NOT been assigned to current Sub-stage Group. Only Stimulus Items can be added to a Sub-stage as Flow Items. Also, note that the Ticker type Stimulus Items cannot be added as a Flow Item.

7a) Shows column: The Shows column for the right-side grid is editable and useful for setting the "Shows" column in the Flow Items grid on the left side. If, for example, this value is set to 4 for the Stimulus Item "Image: Healthcare-Clinton" and then the Item is added to all Groups (selecting For All Groups in the menu below), then the Item will be added to all Groups with Shows set to 4; that is, the Item will appear as a Flow Item a total of 4 times in the DPTE Player in the current Sub-stage. Thus, you are saved the effort of selecting each Group individually and changing the Shows value for each Group in the Flow Items grid.

7b) Set # of shows: As an alternative to setting the # of shows individually, this button allows you to set the # of Shows for all selected items in the grid. Remember, changing the value in the Shows column in this grid has no effect on the Experiment; only the Shows column in the Flow Items grid (see #8 below) affects the Experiment. The column here is provided as a convenience to make setting the values easier.

- 8) Flow Items in Sub-stage for Group grid (aka Flow Items grid): This is the list of all Items that are configured as Flow Items for the current Sub-stage/Group. The Shows column is editable; you can change this value to any whole number greater than or equal to 1. It refers to the number of times the Flow Item appears during the Sub-stage, for this Group. Thus, if you change the Shows value to 5 for a particular item in this grid, it will be equivalent to having 5 copies of this Item added to the Sub-stage/Group, meaning the Item will appear 5 times in the DPTE Player (never consecutively, if possible), during the Flow Phase of the Sub-stage with the current Group. Click the Save button to save any changes to the Shows column. Use the "Set # of shows" button to set the Shows value for all selected items.

The column on the right is the Condition column. Click the oval to access the Condition for the particular Flow Item. In the Player, if this Condition is not met at run-time, the Flow Item will not be presented despite its presence in this list. When a Flow Item has a Condition, the oval has a "C" inside it; otherwise, the oval is empty. You can select multiple rows and use the Set Condition button below the grid to set a Condition for multiple Flow Items.

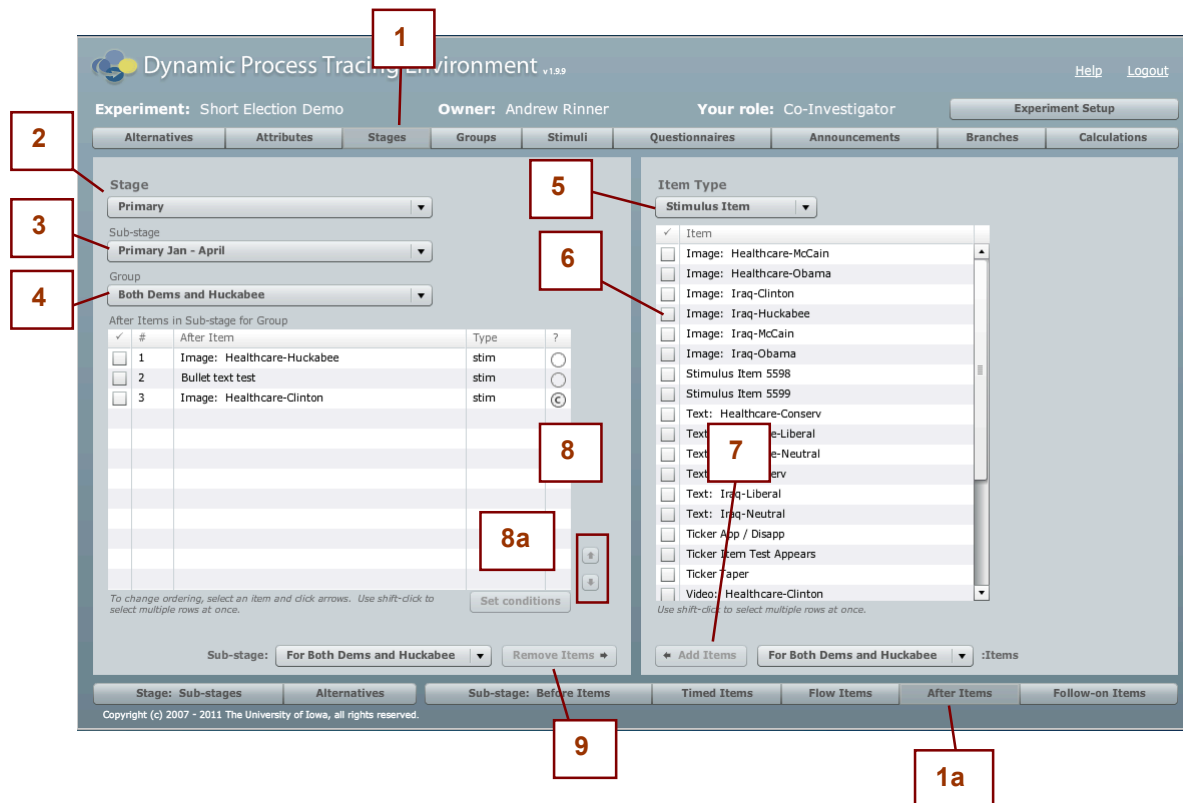
Note that for Social Experiments there will be an additional column in the Flow Items grid. See Section Three: Social Experiments for more information.

- 9) Add Items button: Used to add Items selected in the Items grid to the current Sub-stage Group. Selected Items will be transferred from the Items grid to the Flow Items grid. Use the adjacent menu to specify which Groups the Items should be added to. This enables you to add Items to all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.
- 10) Remove Items button: Used to remove Flow Items selected in the Flow Items grid from the current Sub-stage/Group.

Use the adjacent menu to specify which Groups the Items should be removed from. This enables you to remove Items from all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.

After Items screen

This section explains the After Items screen, which allows the researcher to define the After Items for each Sub-Stage/Group combo.



- 1) & 1a) Stage and After Items tab: used to select this screen.
- 2) Stage menu: Use this menu to switch between the Stages you have created in this Experiment.
- 3) Sub-Stage menu: Use this menu to switch between the Sub-stages you have created for the currently selected Stage. If you want to select a Sub-stage in a Stage different from the currently selected one, first change your selection in the Stage menu.
- 4) Group menu: Use this menu to switch between the Groups you have created. Taken together, the three menus (Stage, Sub-stage, and Group) define a particular Sub-stage/Group combo to which you can add and remove Items.
- 5) Item Type menu: Use this menu to switch between the different types of Items available to be added as After Items. All Item types can be added as After Items.
- 6) Items grid: This is the list of all Items of the selected Item Type that have NOT been added to current Sub-stage/Group combo. Hence, if you have Stimulus Item selected, this grid will list

all Stimulus Items defined in the Experiment that are not already included in the selected Sub-stage/Group combo as After Items.

- 7) Add Items button: This button is used to add the Items selected in the Items grid to the current Sub-stage/Group combo. Use the adjacent menu to specify which Groups the Items should be added to. This enables you to add Items to all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.
- 8) After Items in Sub-stage for Group grid (aka After Items grid): This is the list of all Items that are configured as After Items for the current Sub-Stage/Group combo. To re-order the sequence of the After Items, select an Item in this grid and use the up & down arrow keys (8a).

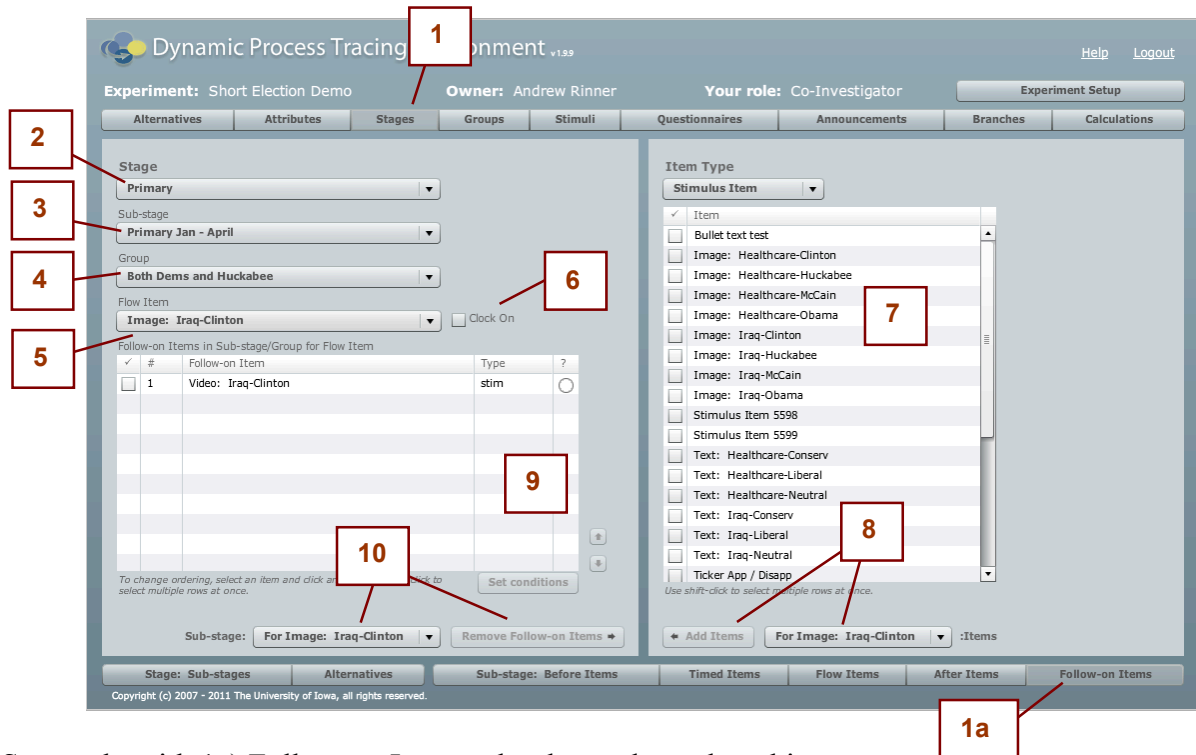
The column on the right is the Conditions column. Click the oval to access the Condition for the particular After Item. In the Player, if this Condition is not met at run-time, the After Item will not be presented, despite its presence in this list. When an After Item has a Condition, the oval has a "C" inside it; otherwise, the oval is empty. You can select multiple rows and use the Set Condition button below the grid to set a Condition for multiple After Items.

Note that for Social Experiments there will be an additional column in the After Items grid. See Section Three: Social Experiments for more information.

- 9) Remove Items button: Use this button to remove After Items selected in the After Items grid from the current Sub-stage/Group combo. Use the adjacent menu to specify which Groups the Items should be removed from. This enables you to remove Items from all Groups of the Sub-stage, or certain Groups you select, in one step, rather than repeating the process for each Group.

Follow-on Items screen

This section explains the Follow-on Items screen, which allows the researcher to define the Follow-on Items for each Flow Item inside each Sub-stage/Group.



- 1) Stage tab, with 1a) Follow-on Items sub-tab: used to select this screen.
- 2) Stage menu: Use this menu to switch between the Stages you have created.
- 3) Sub-stage menu: Use this menu to switch between the Sub-stages you have created for the currently selected Stage. If you want to select a Sub-stage in a Stage different from the currently selected one, first change your selection in the Stage menu.
- 4) Group menu: Use this menu to switch between the Groups you have created. Taken together, the three menus (Stage, Sub-stage, and Group) define a particular Sub-stage/Group combo from which you select Flow Items from menu 5).
- 5) Flow Item menu: This menu contains every Flow Item that has been added to the chosen Group for the designated Sub-stage. Choose the Flow Item to which you want to "attach" Follow-on Items.
- 6) Clock On: If checked, the clock is "on" (i.e. time is running and Flow Items continue to flow) when the chosen Flow Item's Follow-on Items are displayed. If unchecked, the clock stops for the presentation of the Follow-on Items. Note that this does not affect anything about the

Flow Item itself; the clock is always on when Flow Items are opened by the user.

- 7) Item grid: This is the list of all Items defined in the Experiment that have NOT been added as a Follow-on Item for the current Flow Item in the current Sub-stage Group. Any Item type can be added as a Follow-On Item.
- 8) Add Items button: Used to add items selected in the Items grid to the current Flow Item in the current Sub-stage Group. Selected items will be transferred from the Items grid (key 5) to the Flow Items grid (key 8).

Use the adjacent menu to specify whether selected Items should be added only to the currently selected Flow Item, or to all Flow Items in the current Substage-Group. This enables you to add Items as Follow-on Items to every Flow Item (or a chosen subset) in the Substage-Group in one step, rather than having to repeat the process for each Flow Item individually.

- 9) Follow-On Items in Sub-stage/Group for Flow Item grid (aka Follow-on Items grid): This is the list of all items that have been added as Follow-on Items for the current Flow Item in the current Sub-stage/Group. If there are multiple Follow-on Items in the list, then each one opens after the user closes the previous one, just like Before Items and After Items.

The column on the right is the Condition column. Click the oval to access the Condition for the particular Follow-on Item. In the Player, if this Condition is not met at run-time, the Follow-on Item will not be presented, despite its presence in this list. When a Follow-on Item has a Condition, the oval has a "C" inside it; otherwise, the oval is empty. You can select multiple rows and use the Set Condition button below the grid to set a Condition for multiple Follow-on Items.

Use the up and down arrows to change the order of Follow-on Items in the list, selecting each one at a time. For Social Experiments there will be an additional column in this grid; see Section Three: Social Experiments for more information.

- 10) Remove Items button: Used to remove Follow-on Items selected in the Follow-on Items grid from the current Flow Item for the current Sub-stage Group.

Selected Item / All Items menu: Used to specify whether selected Follow-On Items should be removed only from the currently selected Flow Item, or from all Flow Items in the current Substage-Group. This enables you to remove Follow-on Items from all Flow Items (or a chosen subset) in the current Substage-Group in one step, rather than selecting each Flow Item individually.

Groups screen

This section explains the Groups screen, which allows the researcher to define Groups and Group settings for the Experiment.

The screenshot shows the 'Groups' tab in the Dynamic Process Tracing Environment. The interface includes a top navigation bar with tabs for Alternatives, Attributes, Stages, Groups, Stimuli, Questionnaires, Announcements, Branches, and Calculations. The 'Groups' tab is active. The main area is divided into several sections:

- Group Selection:** A dropdown menu labeled 'Group' showing 'Both Dems and Huckabee (id: 35)'. Callout 1 points to the top of this section.
- Form Fields:** Fields for 'Distinct Name' (containing 'Both Dems and Huckabee'), 'Brief Description' (containing 'Group that gets both Democrats, but Republican'), and 'Group' (containing 'Both Dems and Huckabee'). Callouts 2, 3, and 4 point to these fields.
- Buttons:** 'New', 'Delete', 'Save', and 'Cancel' buttons. Callouts 5, 6, and 7 point to these buttons.
- Group Sub-stage Settings:** A table with columns for Group, Stage, Sub-stage, Cong, Pace, and Portion. Callout 8 points to the table header. Callout 9 points to the 'Save' button below the table. Callout 10 points to the 'Group' dropdown above the table. Callout 11 points to a row in the table. Callout 12 points to the bottom of the table. Callout 13 points to the 'Sort by Stage' button below the table.

Group	Stage	Sub-stage	Cong	Pace	Portion
Both Dems and Huckal	Primary	Primary Jan - Apr	100	3	1
Both Dems and Huckal	Primary	Primary May - Aug	0	2	1
Both Dems and McCain	Primary	Primary Jan - Apr	100	3	1
Both Dems and McCain	Primary	Primary May - Aug	0	2	1
Both Reprs and Clinton	Primary	Primary Jan - Apr	100	2	1
Both Reprs and Clinton	Primary	Primary May - Aug	0	2	1
Both Reprs and Obama	Primary	Primary Jan - Apr	100	3	1
Both Reprs and Obama	Primary	Primary May - Aug	0	2	1

- 1) Groups tab: used to select this screen.
- 2) Group menu: Use this menu to switch between the Groups you have created in this Experiment. Note that the Group's id follows the Group name in this menu.
- 3) Distinct Name: The name of the Group; this must be unique to the Experiment.
- 4) Brief Description: A description of the Group, for the researcher's reference only.
- 5) New button: Used to create a new Group. A new Group is created with a default name (such as "Group 562"). You can change the name to a more meaningful one in the Distinct Name field. If you have any unsaved changes you will have to Save or Cancel them before you are able to create a new Group.
- 6) Delete Button: Used to delete the currently selected Group. Note that deleting a Group can have a big effect on the Experiment if there are Items added for Sub-stage/Group combos. You will be asked to confirm your decision via dialog box before deletion will occur.

- 7) Save & Cancel buttons: Used to save or cancel any changes that have been made to any Groups. All the Save and Cancel buttons on the screen function the same way, saving or canceling any changes you have made to any Groups.
- 8) Group Subject Assignment grid: Used to define the weights of randomized distribution of Subjects into Groups, by percentage. This determines the initial assignment of Subjects to Groups at the beginning of the Experiment's run. A value of 50 means a given Subject has a 50% chance of being randomly assigned to this Group. A value of 100 specifies that all Subjects will be assigned to that Group; this how to make all Subjects go through an initial common "entryway" in the Experiment, after which they may be switched to another Group using Branches based on their actions. A value of 0 means that Subjects will never be assigned to that group. The values in this grid must total to 100. Note that any specific Group assignment given during launch will override these settings, i.e. if a group is specified in the URL to the DPTE Player, that Group will be used rather than randomized assignment (See Section One, Part D: Running an Experiment and Accessing Results for information on the launch URL).
- 9) Save & Cancel buttons: Used to save or cancel any changes that have been made to any Groups. All the Save and Cancel buttons on the screen function the same way, saving or canceling any changes you have made to any Groups.
- 10) Group menu: This menu determines which Group's information is visible in the Sub-stage Settings grid below it. Choose a single Group and the grid lists all the Sub-stages, with the values relevant to that Group/Sub-stage combo. Choose "All" to list all Group/Sub-stage combinations and their values.
- 11) Sub-stage Settings grid: This is the tabular display of the Congruency (Cong column), Pace, and Portion settings for one Group (or all Groups, depending on the selection in the Group menu), for each Sub-stage. Values in the Congruency, Pace, and Portion columns are editable.

The Congruency (Cong) column must contain values from 0 to 100, representing percentage. This is used for assigning an Alternative to Stimulus Items, by comparing the Attribute Ratings of Alternatives and the Stimulus Item. A Congruent assignment means the closest matching Alternative (by Rating) is assigned to the Stimulus Item. An Incongruent assignment means the furthest matching Alternative (by Rating) is assigned. A Congruency value of 100 means all Stimulus Items in this Sub-stage, for this Group, will be assigned Congruently. A Congruency value of 70 means 70% of the Stimulus Items in this Sub-stage/Group combo will be assigned Congruently and the remaining 30% will be assigned Incongruently.

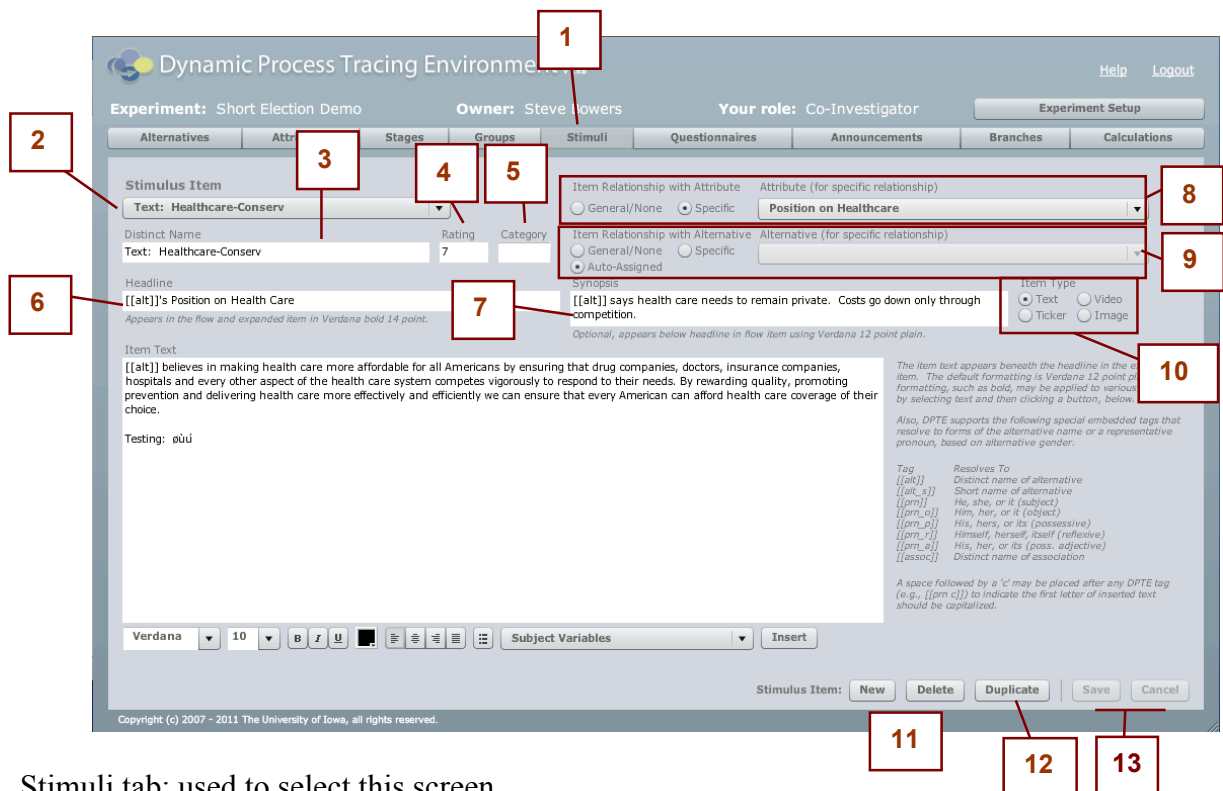
The Pace be any integer value from 1 to 900 and represents time in seconds. Pace determines the speed of flow of Flow Items in the DPTE Player for this Sub-stage/Group combo. A value of 3 indicates that every 3 seconds: A) a new Flow Item (if available) will become visible, B) all visible Flow Items will move down one step, and C) one Flow Item will drop out of the DPTE Player display area (this example assumes a Portion of one; see below). The larger the value of the Pace, the slower the Flow Items will move; normally very small values (1-5) are used.

Portion can be any integer value from 1 to 6, and it determines how many new Flow Items are scrolled onto the Flow Area every Pace move. In other words, if the Pace is 5 and Portion is 3, then every 5 seconds 3 Flow Items will move off the screen and 3 new Flow Items will replace them. Normally Portion is 1, and for greater values the Pace should also be a larger value so that there is time to see all the new Items. DPTE is not meant for simulating a slot machine!

- 12) Sort By Stage / Sort By Group button: This toggle button is enabled only when "All" is chosen in the Group menu above so that all Groups are displayed in the Sub-stage Settings grid. Clicking the button when it says "Sort By Stage" sorts the Sub-stage Settings grid by Stage and Sub-stage; the button will change to say "Sort By Group." Clicking the button when it says "Sort by Group" sorts the Sub-stage Settings grid in the order of Group names, and changes the button name back to "Sort By Stage."
- 13) Save & Cancel buttons: Used to save or cancel any changes that have been made to any Groups. All the Save and Cancel buttons on the screen function the same way, saving or canceling any changes you have made to any Groups.

Stimuli screen

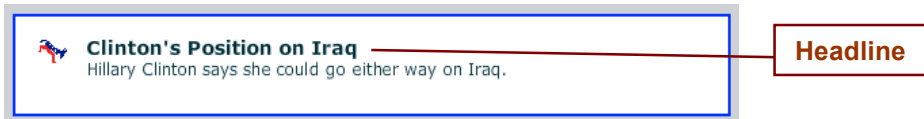
This section explains the Stimuli screen, which allows the researcher to create and manage Stimulus Items for the Experiment.



- 1) Stimuli tab: used to select this screen.
- 2) Stimulus Item menu: Use this menu to switch between the Stimulus Items you have created.
- 3) Distinct Name: The name of the Stimulus Item. This is used in listing Stimulus Items for addition to Sub-stages as Flow, Before, Timed, After, or Follow-on Items and must be unique to the current Experiment. Because Stimulus Items are listed in alphabetical order in DPTe's menus, you may want to preface the text with a code that will allow you to locate the Item more easily (in the example above, Text: is used to separate the Stimulus Items).
- 4) Rating: The rating of this item for the Attribute it is linked to. This is relevant only when a specific Attribute is linked to the item, and if the Alternative is set to Auto-Assigned. In that case, this rating value is used to calculate the congruency among available Alternatives. The value of this field must be greater than zero, and less than or equal to 7, with up to 2 decimal places of precision.
- 5) Category: This field is used only as an aid to the Researcher; it does not affect the Experiment in any way. Type the Category (any name) that you wish to "tag" this Stimulus Item with; in the Experiment Results, the Category for a Stimulus Item is part of any

Recorded Event in which this Stimulus Item is used, and can be useful for sorting and grouping Stimulus Items that are related.

- 6) **Headline:** The Headline of the stimulus item. Tags can be embedded into the text of the Headline (as per the instructions on the Text Stimulus Item screen) and Subject Variables will be resolved in the text. The Headline will be displayed in the Flow Item in the DPTE Player as shown below.

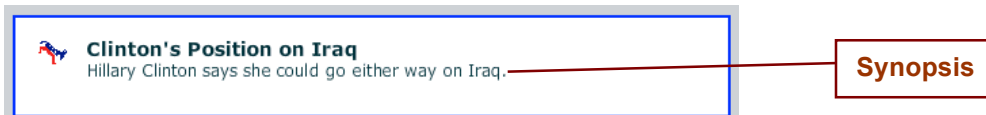


It is required that the Headline be filled with some text, otherwise the Flow Item could be blank and give no clue to the Subject as to its contents.

In the case of Text Stimulus Items, when the item is opened by the Subject (as a Flow Item), or when the item is used as a Timed, Before, After, or Follow-on Item, the Headline will be displayed as below:



- 7) **Synopsis:** The short summary of the Stimulus Item. This is displayed when the Item is used as a Flow Item, as shown below. Tags can be embedded in the Synopsis (as per the instructions on the Text Stimulus Item screen) as well as Subject Variables.



The Synopsis may be left blank if desired.

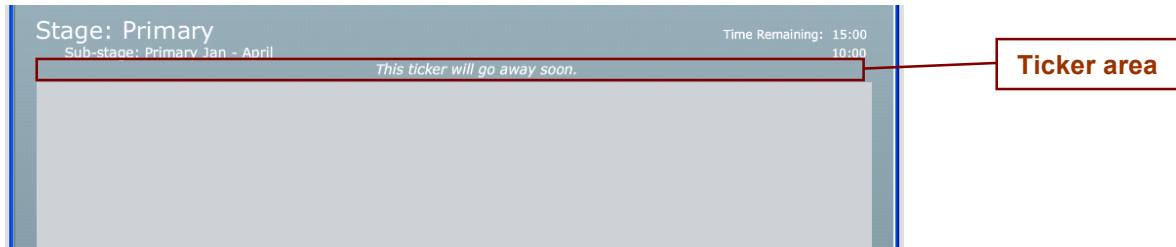
- 8) Attribute specification: Used to specify whether the content of the Stimulus Item concerns a particular Attribute (select “Specific”) or not (select “General / None”). If you select “Specific”, then choose the relevant Attribute from the attribute menu.
- 9) Alternative specification: Used to specify whether the Stimulus Item has a specific Alternative (select “Specific”) or that the Alternative should be Auto-Assigned (select the radio button “Auto-Assigned”) or, that it is not concerned with any Alternative (select “General/None”). Auto-Assigned means that an Alternative will be linked to the Stimulus Item at run-time in the DPTE Player depending on the following settings:
 - a. The Rating of the Stimulus Item
 - b. The Attribute of the Stimulus Item (in the Attribute Relationship area)
 - c. The Alternatives available to the Stage in which the Stimulus Item is used, and the Ratings of those Alternatives
 - d. The Congruency settings for the Sub-stage/Group where the Stimulus Item is used.

Based on this the closest matching (for Congruent items), or furthest matching (non-Congruent) Alternative is assigned. See Section One, Part B, Stimulus Item: Auto-Assigned for more information on Auto-Assigned Alternatives.

If you want to specify a Specific Alternative, select the relevant Alternative from the menu. This tells the DPTE Player that a particular Stimulus Item relates to that Alternative, for tracking Subject choices.

Note: The embedded tags in Headline, Synopsis and Text of a Stimulus Item are not relevant if General / None is selected for Alternative. In that case, if the tags are used, they will not be resolved. Tags *will* be resolved, however, for Specific Alternative selections, even though normally tags are not needed in such an item (since the Researcher knows exactly the name, gender, etc. s/he is writing about) but this allows "re-use" of text without having to resolve tags by hand, and also allows the Researcher to switch a Stimulus Item's Alternative Relationship from Specific to Auto-Assigned and back without changing the tags.

- 10) Item Type menu: Used to specify the type of Stimulus Item. There are four kinds of Stimulus Items: Text, Video, Image or Ticker. Text, Video and Image items are self-explanatory. Ticker Items show up on the top of the display area of the player as shown below; the text either appears centered or it scrolls from the right side of the Ticker area to the left side.



- 11) New and Delete button: New is used to create a new Stimulus Item. A new Stimulus Item is created with a default unique name (such as "Stimulus 562"). You can change the name to a more meaningful one in the Distinct Name field but it must remain unique within the Experiment. Because Stimulus Items are listed in alphabetical order in DPTE's menus, you may want to preface the text with a code or prefix that will allow you to locate the Item more easily. You will have to Save or Cancel any changes you have made to the current Stimulus Item before you are able to create a new Stimulus Item.

Delete button: Used to delete a Stimulus Item. You must Save or Cancel any changes before you are able to delete a Stimulus Item.

- 12) Duplicate: This button is used to Duplicate a Stimulus Item. A dialog will allow you to choose any of the Items in the current Experiment and add them to any Experiment in which you are a Co-Investigator or Owner. Choose the current Experiment to Duplicate the Item within the same Experiment.
- 13) Save/Cancel: Used to save changes or to cancel current changes. Note that this applies to all of the Stimulus Items you have edited; if you use the Stimulus Item menu to switch to another Stimulus Item, those changes will be lost if you click Cancel, and/or saved when you click Save.

Note that an additional control, Modify Social Data, will appear on the Stimulus Item screen if the Experiment has been designated as a Social Experiment. See Section Three: Social Experiments for more information.

Stimulus Item Type: Text

Dynamic Process Tracing Environment v.1.9a Help Logout

Experiment: Short Election Demo Owner: Steve Bowers Your role: Co-Investigator Experiment Setup

Alternatives Attributes Stages Groups Stimuli Questionnaires Announcements Branches Calculations

Stimulus Item

Text: Healthcare-Conserv

Item Relationship with Attribute: General/None Specific Attribute (for specific relationship): Position on Healthcare

Distinct Name: Healthcare-Conserv Rating: 7 Category:

Item Relationship with Alternative: General/None Specific Auto-Assigned

Headline: [[alt]]'s Position on Health Care
Appears in the flow and expanded item in Verdana bold 14 point.

Synopsis: [[alt]] says health care needs to remain private. Costs go down only through competition.
Optional, appears below headline in flow item using Verdana 12 point plain.

Item Type: Text Video Ticker Image

Item Text: [[alt]] believes in making health care more affordable for all Americans by ensuring that drug companies, doctors, insurance companies, hospitals and every other aspect of the health care system competes vigorously to respond to their needs. By rewarding quality, promoting prevention and delivering health care more effectively and efficiently we can ensure that every American can afford health care coverage of their choice.

Testing: øùú

14

15

16

Verdana 10 B I U [Color] [Align] [List] [Text] Subject Variables Insert

Stimulus Item: New Delete Duplicate Save Cancel

Also, DPT supports the following special embedded tags that resolve to forms of the alternative name or a representative pronoun, based on alternative gender.

Tag	Resolves To
[[alt]]	Distinct name of alternative
[[alt_s]]	Short name of alternative
[[prn]]	He, she, or it (subject)
[[prn_o]]	Him, her, or it (object)
[[prn_p]]	His, hers, or its (possessive)
[[prn_r]]	Himself, herself, itself (reflexive)
[[prn_e]]	His, her, or its (pass. adjective)
[[assoc]]	Distinct name of association

A space followed by a 'c' may be placed after any DPT tag (e.g., [[prn c]]) to indicate the first letter of inserted text should be capitalized.

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The above controls are available for **Text** Stimulus Items

14) Item Text: Used to specify the text for a Text-type Stimulus Item. Tags (as shown in area 15 on-screen) can be inserted in this Item Text. The text can also be formatted using the formatting toolbar (see #16 below). Images and hyperlinks can be included in the text via HTML by using `{{` and `}}` in place of the standard HTML `<` and `>` characters; see Using HTML in Text Fields in Section One for more information.

15) Tag listings: List of the different tags that can be used in Headlines, Synopsis and Item Text, along with the meaning of each tag. See Section One, Part B, Stimulus Item: Tags for a list of all the Tags and how they are resolved.

16) Formatting toolbar: Used to apply special formatting to the Item Text. Options available are font, size, bold, italics, underline, text color, alignment and bulleted text. You can also insert Subject Variables which are resolved by the Player.

Stimulus Item Type: Video

Dynamic Process Tracing Environment v1.0.0 Help Logout

Experiment: Short Election Demo Owner: Steve Bowers Your role: Experiment Setup

Alternatives Attributes Stages Groups Stimuli Questionnaires Announcements Branches Calculations

Stimulus Item

Video: Healthcare-Clinton

Item Relationship with Attribute: Attribute (for specific relationship)
 General/None Specific Position on Healthcare

Item Relationship with Alternative: Alternative (for specific relationship)
 General/None Specific Hillary Clinton

Item Type:
 Text Video
 Ticker Image

Distinct Name: Video: Healthcare-Clinton Rating: 1.25

Headline: Clinton Speaks on Healthcare
Appears in the flow and expanded item in Verdana bold 14 point.

Synopsis: Hillary Clinton goes over her recommended changes to healthcare.
Optional, appears below headline in flow item using Verdana 12 point plain.

Video URL: rtmp://flashmedia.uiowa.edu/contentApp/dpte/content/clar/polisci/dpte/redlawsk/clinton_healthcare.flv

Test Click to test URL entered above.

The video referenced above must be an H.264-compliant streamed (rtmp://...) or progressive-download (http://...) video.

It will display in the DPTe player within an 800 x 450 pixels area. This is a 16:9 aspect ratio, therefore videos in this ratio will scale precisely to fit the area. Videos with other aspect ratios will be scaled up or down to fit the closest dimension and have black space either to the left/right or above/below the video.

Suggested video sizes are:
- 800 x 450 (16:9, best fit, no scaling)
- 640 x 360 (16:9, common size, scaled up)
- 600 x 450 (4:3, best fit for this ratio, no scaling)
- 400 x 300 (4:3, common size, scaled up)

Note that videos are automatically played in the DPTe player and automatically put away when completed. There is no playback rate volume control and time indicator.

Stimulus Item: New Delete Save Cancel

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Waiting for localhost...

The above controls are available for **Video** Stimulus Items.

- 17) Video URL: Used to specify the source of the video in the form of a complete URL. Videos must be H.264-compliant. Recommended sizes for videos are: 800x450; 640x360; 600x450; and 400x300. Videos longer than 5 minutes or larger than 20M should be streamed (rtmp://) from a streaming server, rather than progressively downloaded (http://).
- 18) Test button: After filling in the Video URL, this button is used to test whether the video is being successfully retrieved and played by the system. If the video exists and has been loaded onto a server and the correct URL is given, the video will be displayed in the Video display area.
- 19) Video display area: Used to display the video for the purposes of verification. This video will play for the Subject in the DPTe Player if the Subject selects it as a Flow Item, or if this Stimulus Item is assigned as a Before, After, Timed, or Follow-on Item.

Stimulus Item Type: Image

Dynamic Process Tracing Environment v1.0.0 Help Logout

Experiment: Short Election Demo Owner: Steve Bowers Your role: Experiment Setup

Alternatives Attributes Stages Groups Stimuli Questionnaires Announcements Branches Calculations

Stimulus Item

Image: Iraq-Obama

Item Relationship with Attribute: Attribute (for specific relationship)
 General/None Specific Position on Iraq

Distinct Name: Image: Iraq-Obama Rating: 1.5

Item Relationship with Alternative: Alternative (for specific relationship)
 General/None Specific Barack Obama
 Auto-Assigned

Headline: Obama goes to Iraq
Appears in the flow and expanded item in Verdana bold 14 point.

Synopsis: Barack Obama met with Iraq leader Jalal Talabani.
Optional, appears below headline in flow item using Verdana 12 point plain.

Image URL: http://itsnt362.iowa.uiowa.edu/testimages/obama_iraq.jpg

Item Type:
 Text Video
 Ticker Image

Test Click to test URL entered above.

The image referenced above must be in one of the following formats:
JPG, PNG, GIF

The image will display in the DPTE player within an 822 x 535 pixels area. If the image is smaller in dimension than the area, then the image will display centered within the area, at its 100% scale. If the image is larger than the area, then it will be scaled down to fit within the area.

The test area at left is similarly proportioned to the player area, though 508 x 199 in size.

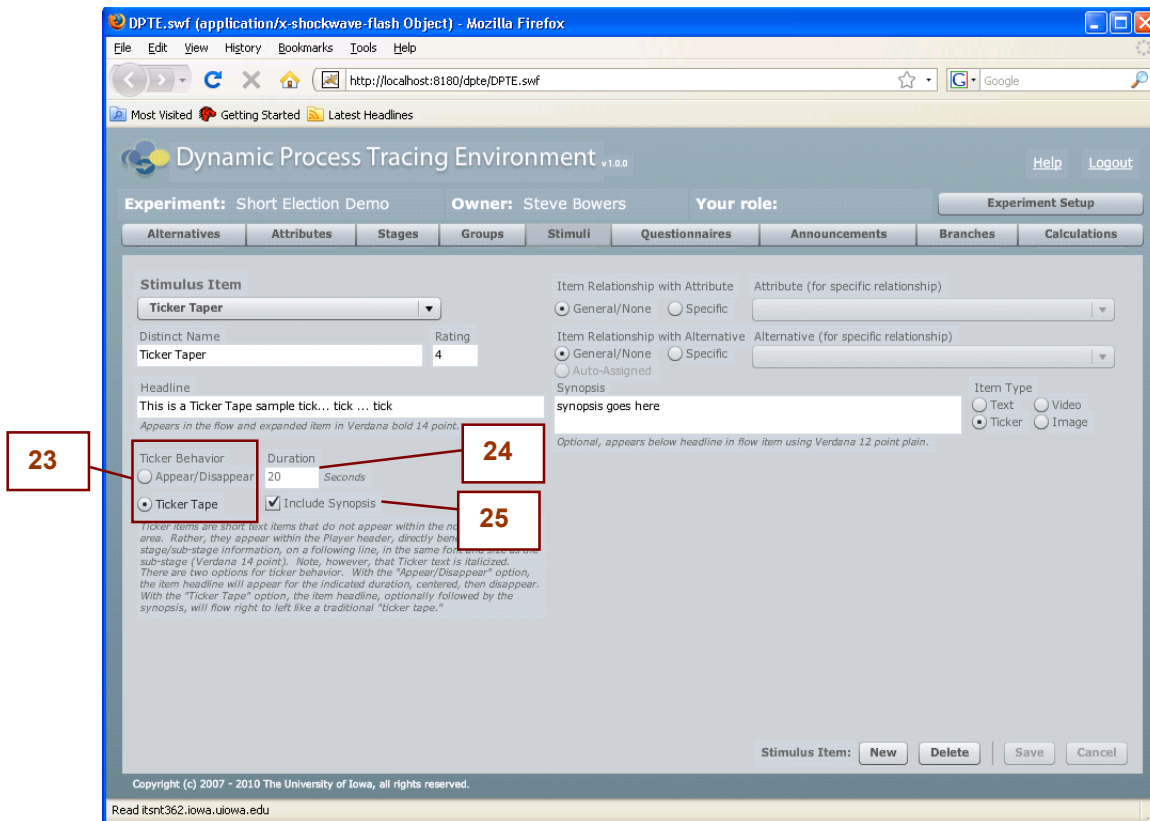
Stimulus Item: New Delete Save Cancel

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Read itsnt362.iowa.uiowa.edu

The above controls are available for **Image** Stimulus Items.

- 20) Image URL: Used to specify the source of the image in the form of a complete URL. Images must be in JPG, PNG or GIF format. In the DPTE Player, Images are displayed within an 822 x 535 pixel area. If the image is smaller than the area, the image will display centered within that area at 100%. If the image is larger, it will be scaled down to fit inside that area. Also note that the area available to Images is slightly smaller if the Item is a Shareable Item in a Social Experiment (see Section Three: Social Experiments).
- 21) Test button: After filling in the Image URL, this button is used to test whether the image is being successfully retrieved by the system. If the image is correctly hosted and has been loaded onto a server, and the correct URL is used, the image will be displayed in the Image display area.
- 22) Image display area: Used to display the image for the purpose of verification. This image will be displayed in the DPTE Player if the Subject selects it as a Flow Item, or if this Stimulus Item is used as a Before, After, Timed, or Follow-on Item. Note that the Image test area is smaller than the display area of the DPTE Player (about half the size) so images will likely be scaled down to fit in the Test area.

Ticker Stimulus Items



The above controls are available for **Ticker** Stimulus Items. Ticker Stimulus Items cannot be added as Flow Items.

23) Ticker Behavior: Used to specify the Ticker behavior. There are two types of Ticker behaviors available.

Appear / Disappear: Displays the Headline of the Stimulus Item in italics above the display area of the DPTE Player for the duration specified. After the specified duration the text fades away.

Ticker Tape: Displays the Headline (and optionally the Synopsis too) as moving text from left to right. It takes about 10 seconds for text to travel the length of the screen.

24) Duration: Used to specify the duration of the Ticker display for Appear/Disappear type Tickers.

25) Include Synopsis option: Used to specify whether the Synopsis will also be displayed in the case of Ticker Tape behavior; otherwise only the Headline will be used.

Questionnaires screen

This section explains the Questionnaires screen, which allows the researcher to create and manage Questionnaires and Questions for the Experiment.

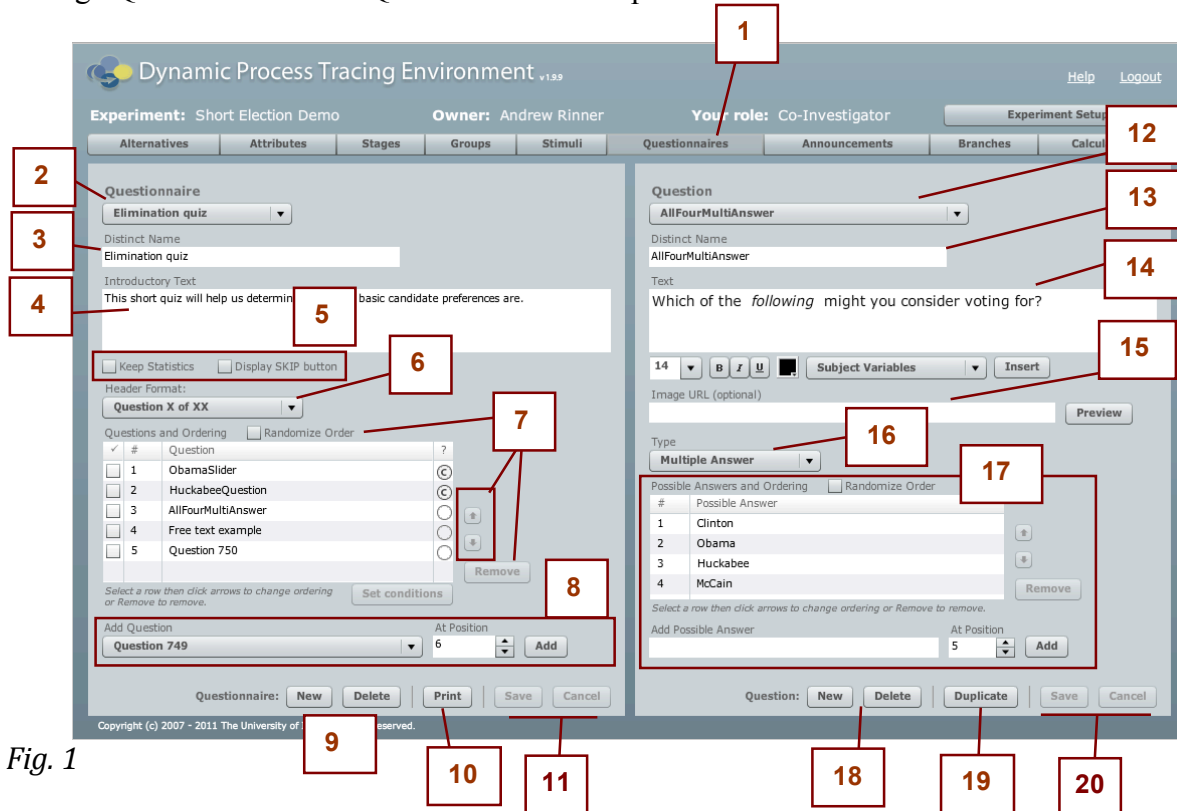


Fig. 1

The left panel of this screen is used to create and manage Questionnaires which are ordered collections of Questions. Questionnaires can then be used as Before, Timed, After, or Follow-on Items. The right panel of this screen is used to create and manage Questions.

- 1) Questionnaires tab: used to select this screen.
- 2) Questionnaire menu: Use this menu to switch between the Questionnaires you have created for this Experiment.
- 3) Distinct Name: The name of the Questionnaire. This is used in listing Questionnaires for addition to Sub-stages as Before, Timed, After, or Follow-on Items. It is also used as part of the name for Subject Variables created when the Questionnaire is presented (it is combined with the Question name, or with a pre-defined stem in the case of Statistics that can be generated). A Questionnaire's name is only shown to a Subject if the Questionnaire is presented as a Shared Timed Item (see Section Three: Social Experiments).

- 4) **Introductory Text:** This text becomes the introduction to the Questionnaire, presented before any Questions are presented. A Questionnaire is displayed as a set of screens, one for each Question. The first screen displays the Introductory Text along with a Begin button that enables the Subject to start the Questionnaire. If the Introductory Text is left blank, the DPTE Player skips the introduction screen and displays the first Question of the Questionnaire immediately instead.

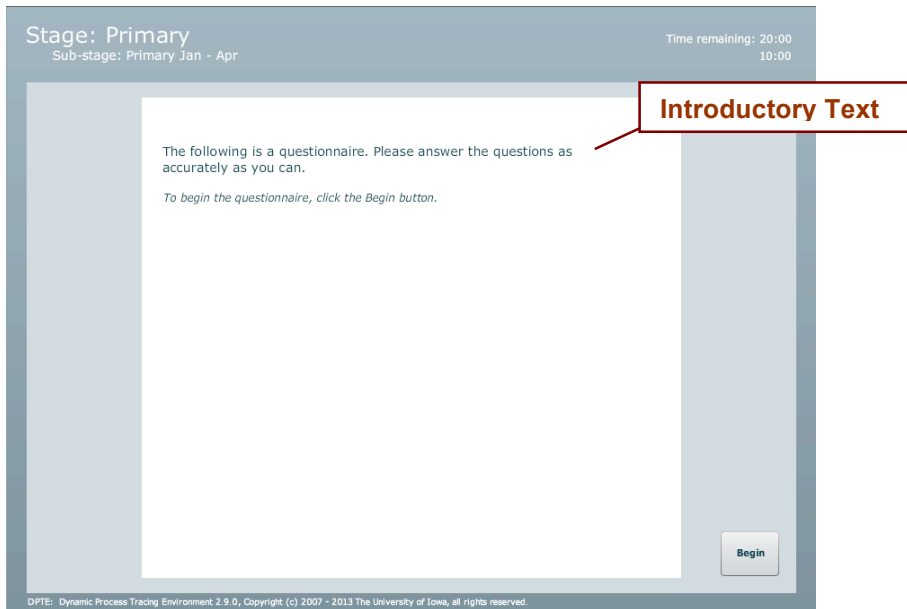


Fig. 2 Sample Introductory Text displayed

- 5) **Keep Statistics checkbox and Show SKIP Button checkboxes:**

Keep Statistics: Checking this box indicates to the DPTE Player that when this Questionnaire is presented, simple statistics should be computed based on all Questions that have a Numeric answer format. For all Questions of this type, the following values are kept: total, average (mean), minimum value, maximum value, and standard deviation (using 'n' rather than 'n+1' in the divisor). These values are stored as Subject Variables using the Questionnaire Name with the strings `."_total"`, `."_average"`, `."_min"`, `."_max"` and `."_sd"` added.

Show SKIP Button: If checked, every Question presented will have a Skip button available, allowing advancement to the next Question without displaying a warning dialog. **NOTE:** even when Skip is not enabled, then Subject can skip Questions by leaving them blank and then clicking Yes to the warning dialog. The Skip button just makes it easier, and makes the availability of the option more overt. The word on the button (default is "Skip") can be changed from the Experiment Dashboard's Settings.

- 6) Header Format: Used to select the format of the header on each Question screen in the DPTE Player. There are 3 options: Question X of XX, Question X, or blank [no header].

Both of the first two options display the Question number, and the first format also displays the total number of Questions in the Questionnaire. The third format displays nothing.

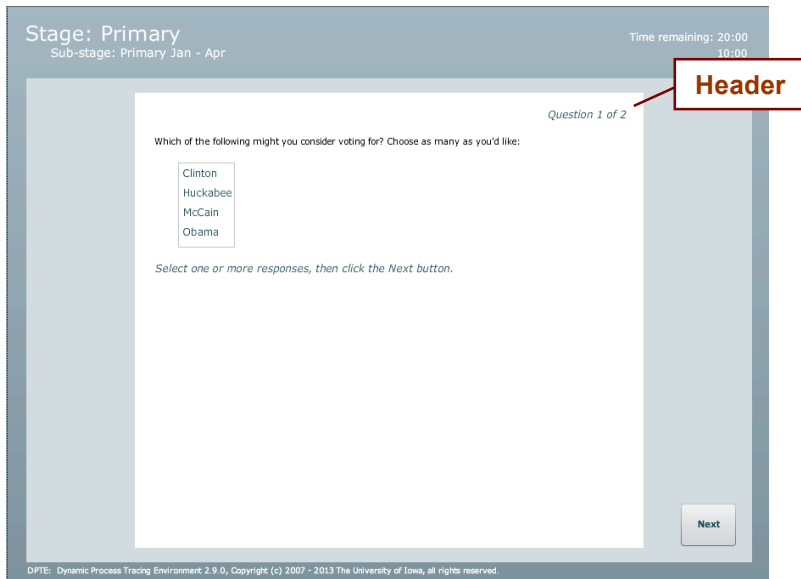


Fig. 3 Sample Question screen in DPTE Player, showing Header Format "Question X of XX"

- 7) Questions and Ordering grid: Lists the Questions that have been added to the Questionnaire, in their specified order; note that the Randomize Order check box instructs the Player to disregard the specified order and present Questions in a random order.

To reorder the position of a Question, select the Question and use the up-down arrows. To remove a Question from the Questionnaire, select the Question and click the Remove button. Removing a Question does not delete the Question; it just removes it from the currently selected Questionnaire.

The rightmost column in the grid is used for Conditions. Each Question can be dependent on a Condition that is tested at the time the Question is about to be presented. If this test fails, the Question is not presented and the DPTE Player looks at the next Question. You can select multiple rows and use the Set Condition button to set several at once to the same Condition.

- 8) Add Question: Used to add an already-defined Question into the Questionnaire. Use the menu to select the Question you want to add to the Questionnaire. If desired, change the position number of the Question to be added using the At Position counter; the default position is set to the end of the Questionnaire. Click the Add button. After adding Questions they can be re-ordered as explained in [7].

9) New and Delete buttons

New button: Used to create a new Questionnaire. A new Questionnaire is created with a default unique name (such as "Questionnaire 562"). You can change the name to a more meaningful one in the Distinct Name field but it must remain unique within this Experiment. You will have to Save or Cancel any changes you have made to the current Questionnaire before you are able to create a new Questionnaire.

Delete button: Used to delete the currently selected Questionnaire. You must Save or Cancel any changes before you are able to delete a Questionnaire.

10) 10a) **Print button:** This will create and open an external window that contains the contents of the Questionnaire formatted for printing. Use your system's print command to actually print the contents of that window.

10b) **Duplicate Questionnaire:** This button will create an exact copy of the current Questionnaire, including the same Questions and Conditions. This can be done so that the same test/quiz/survey, etc, can be given twice in the same Experiment. If you use the same Questionnaire twice (without making a duplicate), then the results are overwritten the second time, because Subject Variables are stored in the form questionnaireName.questionName. When you duplicate a Questionnaire, the duplicate has a different name and the Subject Variables are distinct. Note that the Questions are the same entities, however. If you edit a Question used in multiple Questionnaires it changes for all of them, and Duplicate Questionnaire does not duplicate the Questions; rather it adds them to the new Questionnaire in the same order they are found in the old one.

11) **Save/Cancel:** Used to save changes or to cancel current changes to the Questionnaire. Note that saving has the effect of saving every change made on the screen, whether to Questionnaires or Questions.

NOTE: The Questionnaires screen contains an extra control (the Modify Social Data button) for Social Experiments. See Section Three: Social Experiments for more information.

Questionnaire Screen - Questions

The right-side panel of the Questionnaires screen is used to create and manage Questions which can then be added to Questionnaires using the left-side panel.

- 12) Question menu: Use this menu to switch between the Questions you have created.
- 13) Distinct Name: The name of the Question. This is used in listing Questions for addition to Questionnaires on the left panel, and is also part of the name of Subject Variables created when Subjects give a response to a Question. The Subject Variable name takes the form: questionnaireName.questionName
- 14) Text: The "prompt" displayed in the DPTE Player for this Question. The figure below gives an example. It is recommended that this should not be left blank, otherwise the Subject will see no indication as to how to respond to the Question. The font size can be specified with the menu; the text will display at this size in the Player. Text can be bold, italic, or underlined, and font, font size and color can be set. Also, Subject Variables can be inserted into this field and will be resolved by the Player to their current value.

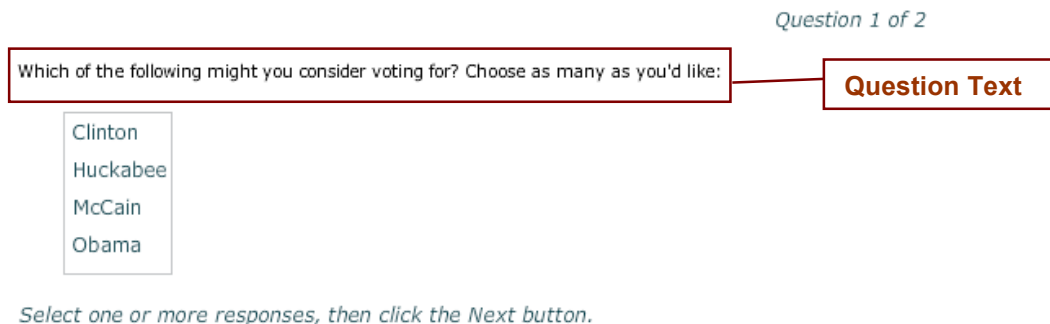


Fig. 4 Question Text or "Prompt"

- 15) Image/Video URL: Optionally, an image or video can be included for display with the Question. In the Player, the image or video appears above the Question's text or "prompt." The preview button can be used to insure that the given URL is correct. Use the radio button (not shown in the graphic) to designate whether it is an image or video link.
- 16) Question Type menu: Used to specify the type of Question. The following options are available: Fill in the Blank, Free Text, Multiple Answer, Multiple Choice, Slider.
- 17) Question Type details (see specific Question Types, #20 and beyond): This area is used to further define the details of the Question depending upon the Question Type, which changes depending on what is selected in the Question Type menu. This portion is explained subsequently in the document for each different Question Type starting at #21.

18) New and Delete button: New is used to create a new Question. A new Question is created with a default unique name (such as "Question 562"). You can change the name to a more meaningful one in the Distinct Name field but it must remain unique within the Experiment.

Delete button: Used to delete the currently selected Question. You must Save or Cancel any changes before you are able to delete a Question. Deleting a Question will also remove it from any Questionnaire to which it has been added.

19) Duplicate Button: Makes a copy of the current Question, with all of the current Question's data and Possible Answers.

20) Save/Cancel: Used to save changes or to cancel current changes to the Question or Questionnaire.

Questionnaire Screen - Question Types - Fill in the Blank

The image below shows an example of a Fill in the Blank Question as displayed in the DPTE Player.

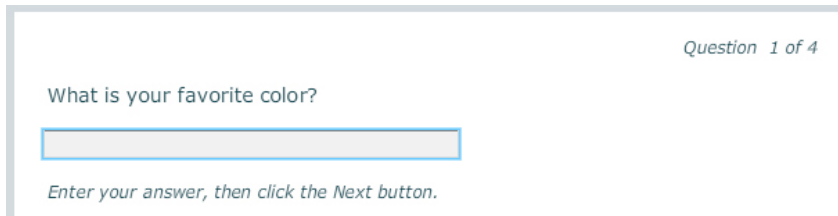


Fig. 5 - Sample Fill in the Blank Question as rendered in DPTE Player

The image below shows the controls used to specify the details of a Fill in the Blank type Question.

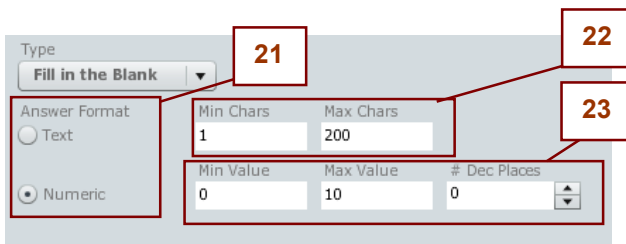


Fig. 6 - Specifying details of the Fill in the Blank question type

- 21) Answer Format: Fill in the Blank Questions can have one of two Answer Formats, Text or Numeric, which determine how the value is stored. Select the appropriate Answer Format for this Question. Only responses with a Numeric format are used when generating Statistics for a Questionnaire.
- 22) Text format properties: These fields are enabled only when Text is specified as the Answer Format. These fields set the minimum and maximum length of the answer, in characters, allowed for this question. If the Subject tries to answer with too few or too many characters, a warning dialog is generated and the answer must be re-entered (note that the Subject can always delete the entire response and skip the Question).
- 23) Numeric format properties: These fields are enabled only when Numeric is specified as the Answer Format. These fields set the minimum and maximum numeric value allowed for the answer to this question, as well as the number of decimal places of precision that are stored for the answer. Values entered that are outside the range are not allowed and must be re-entered (note that the Subject can always delete the entire response and skip the Question).

Questionnaire Screen - Question Types - Free Text

The image below shows an example of a Free Text Question as displayed in the DPTE Player.

Question 3 of 3

Tell us more of what you think about the candidates

Enter your answer, then click the End button to end the questionnaire.

Fig. 7 - Sample of Free Text question type displayed in the DPTE Player

The image below shows the controls used to specify the details of a Free Text type Question.

Type	Free Text	
Min Chars	20	Max Chars
		200

24

Fig. 8 - Free Text controls

24) Free Text properties: Used to specify the minimum and maximum number of characters allowed in the answer. The text area will not accept more than the Max Chars amount, and if fewer than Min Chars are entered the Subject will be prompted to re-enter their response. Note that the Subject can always delete the entire response and skip the Question.

Questionnaire Screen - Question Types - Multiple Answer

The image below shows an example of a Multiple Answer Question as displayed in the DPTE Player. This question type displays a set of options (Possible Answers) to the Subject, using check boxes to indicate that the Subject may select one or more of the options.

Question 2 of 3

Which of the following might you consider voting for? Choose as many as you'd like:

- Clinton
- Huckabee
- McCain
- Obama

Select one or more answers, then click the Next button.

Fig. 9 - Sample Multiple Answer question type as displayed in DPTE Player

The image below shows the controls used to specify the details of a Multiple Answer type Question.

The screenshot shows the configuration interface for a Multiple Answer question. At the top, the 'Type' is set to 'Multiple Answer' and the 'Display as list box' checkbox is unchecked. Below this is a table titled 'Possible Answers and Ordering' with columns for '#', 'Possible Answer', and 'At Position'. The table contains four rows: 1 Clinton, 2 Huckabee, 3 McCain, and 4 Obama. To the right of the table are up and down arrow buttons and a 'Remove' button. Below the table is an 'Add Possible Answer' section with a text input field, an 'At Position' dropdown set to 5, and an 'Add' button.

#	Possible Answer	At Position
1	Clinton	
2	Huckabee	
3	McCain	
4	Obama	

Fig. 10 - Multiple Answer question type as displayed in DPTE Player

- 25) Display as List Box: Multiple Answer Questions normally display in the DPTE Player using check boxes as in Figure 9. If Display as List Box is checked, then the Question displays using a list box as in Figure 4 under #14) Text. Multiple selections can still be made using the Control key on a PC or the Command key on a Macintosh.
- 26) Possible Answers: This is the list of Possible Answers that have been defined for this Question. Possible Answers are defined specifically for a Question; they are not re-used between Questions.

The order of the Possible Answers can be changed by selecting one and moving it up and down with the arrow buttons to the right. The Randomize Order checkbox above the grid can be used to force the DPTE Player to display the Possible Answers in a random order, ignoring the listed order in the grid.

A Possible Answer can be removed from the list by selecting it and clicking Remove; this has the effect of deleting the Possible Answer as well. The text of an answer can be edited in-place in the grid by clicking on the text.

- 27) Add Possible Answer: Used to create a new Possible Answer for the current Question. Type the text for the Possible Answer, optionally specifying the position in the list for the answer, and click Add. To change the text of a Possible Answer after it has been added, click on the text in the grid.

Questionnaire Screen - Question Types - Multiple Choice

The image below shows an example of a Multiple Choice Question as displayed in the DPTE Player. This question type lists a set of options (Possible Answers) to the Subject using radio buttons to indicate that the Subject should select only one of the options.

Question 3 of 4

Select the one that you like most

Clinton

Obama

McCain

Huckabee

Select an answer, then click the Next button.

Fig. 11 - Sample display of Multiple Choice question type in DPTE Player

The image below shows the controls used to specify the details of a Multiple Choice type question.

Type: **Multiple Choice** Display as list box

Answer Format: Text Numeric

Possible Answers, Values, Ordering Randomize Order

#	Possible Answer	Value
1	Clinton	text
2	Huckabee	text
3	McCain	text
4	Obama	text

Select a row then click arrows to change ordering or Remove to remove.

Add Possible Answer: Value: text At Position: 5 Add

Note: numeric possible answers must supply both a text choice to be displayed and a numeric value to be assigned when the choice is made. These may be the same or different (e.g., "9" and 9 or "Democrat" and 1).

Fig. 12 - Specifications for the Multiple Choice question type

28) Display as List Box: A Multiple Choice Question is normally displayed in the DPTE Player using radio buttons as in Figure 11; the Display as List Box option displays the Question using a combo box that allows just one selection.

29) Answer Format: The answer to Multiple Choice question types can be saved in the system either in a Text or Numeric format. Under Answer Format specify the appropriate format for the answers to your question. Only responses with a Numeric Format are used when generating Statistics for a Questionnaire.

30) Possible Answers: This is the list of Possible Answers defined for this Question. The options can be re-ordered by selecting a Possible Answer and moving it up and down using the

arrows to the right of the grid. A Possible Answer can be edited in place by clicking on the text of the Answer in the grid; a Possible Answer can be removed from the list by selecting it and clicking Remove.

The Randomize Order checkbox above the grid can be used to display the Possible Answers in a random order; in this case, the listed order in the grid is ignored.

The Value column is relevant only when the Answer Format is Numeric. For Questions with a Numeric format, the Value is what is stored when the Subject selects a Possible Answer. When the Answer Format is Text, the actual text of the Possible Answer is stored.

31) Add Possible Answer: Used to create a new Possible Answer for the question. Type the text for the Possible Answer, optionally specify the position in the list for the answer and click Add.

In cases where the Answer Format is Numeric, a numeric value must also be given in the Value field; this value is what will be stored when the Subject selects this Possible Answer.

When the Answer Format is Text, the text given in the Possible Answer field will be stored when the Subject selects this Possible Answer.

In both cases, the text of the Possible Answer is what is used to display the Possible Answer to the Subject; the Value field is never displayed.

Questionnaire Screen - Question Types - Slider

The image below shows an example of a Slider question as displayed in the DPTE Player. This question type can be used when the answer is a numeric value within a given minimum and maximum.

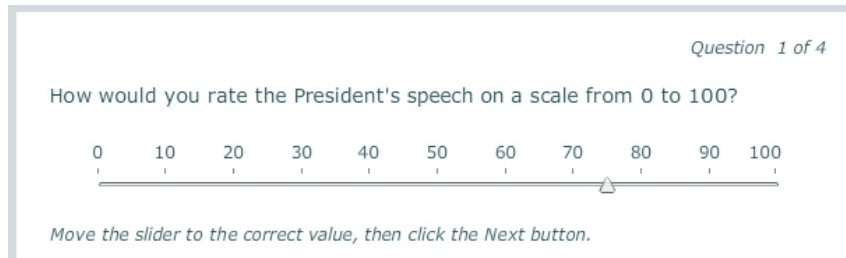


Fig. 13 - Sample of Slider question type displayed in the DPTE Player

The image below shows the controls used to specify the details of a Slider type question.

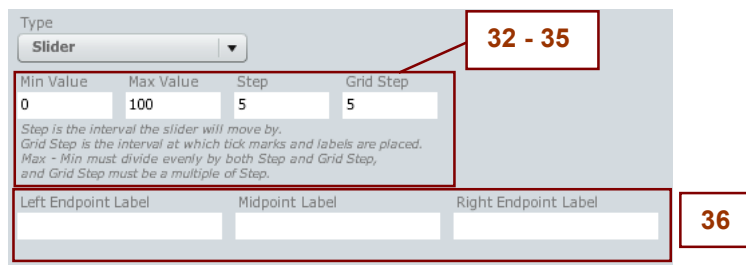


Fig. 14 - Slider question type property fields

- 32) Min Value field: the value for the left-most position of the slider.
- 33) Max Value field: the value for the right-most position of the slider.
- 34) Step field: Defines the interval with which the slider will move, and thereby determines which values within the range are selectable. For example, for the settings given above with a step of 5 and a Min Value of 0, only values such as 5, 10, 15, etc. can be selected. 12, 28, etc, can not be selected with the Slider in this example. Step must be evenly divisible into the Range (Max Value - Min Value)
- 35) Grid Step: Defines the numeric intervals that are displayed on the Slider by the DPTE Player. The Grid Step must be a multiple of Step; therefore, if an interval is displayed it is also selectable. In the example above (fig. 14) since Step is 5, every 5th step is selectable, and since Grid Step is also 5, every 5th number is labeled.
- 36) Slider Labels: Optional labels can be used for the ends and midpoint of the Slider to further convey to the Subject the meaning of the Slider's numeric range.

Announcements screen

This section explains the Announcements screen, which allows the researcher to create and manage Announcements for the Experiment.

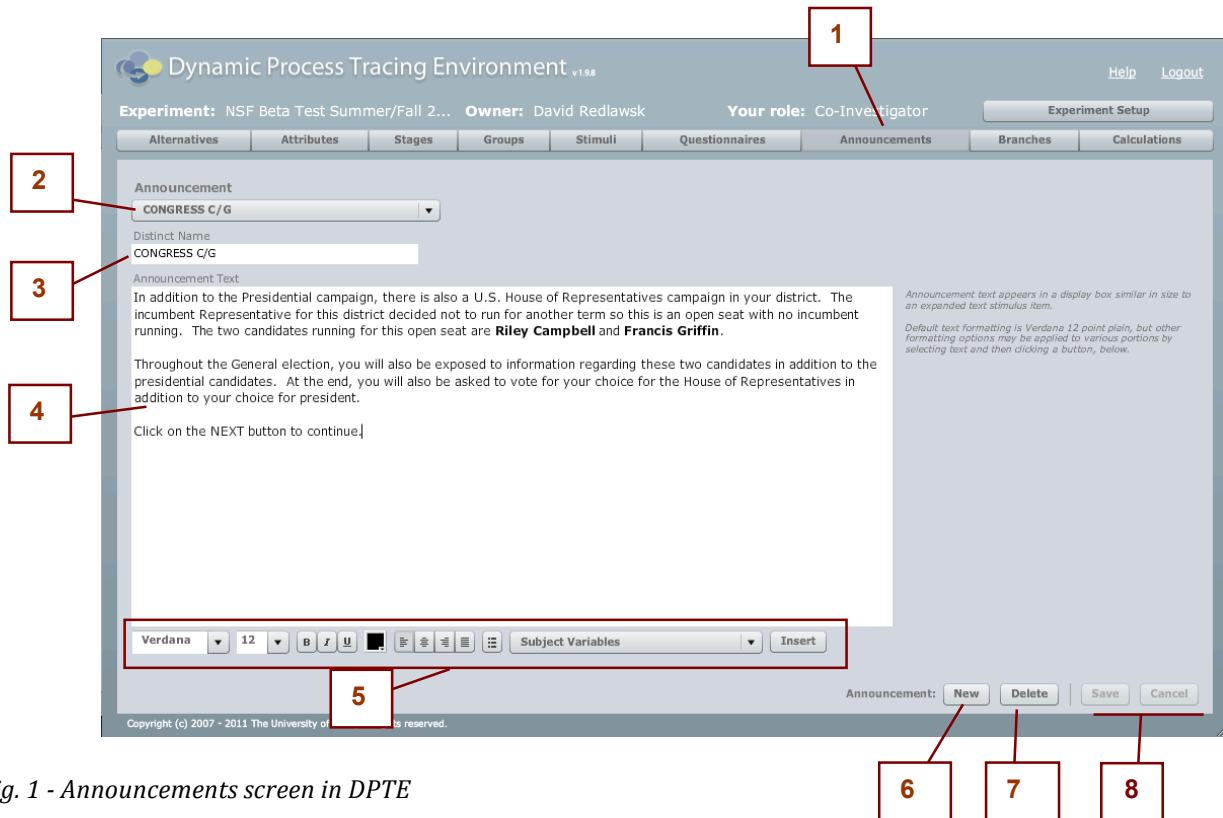


Fig. 1 - Announcements screen in DPTE

- 1) Announcements tab: used to select this screen.
- 2) Announcement menu: Use this menu to switch between the Announcements you have created for this Experiment.
- 3) Distinct Name: The name of the Announcement; must be unique within the Experiment.
- 4) Announcement Text: Used to specify the text of the Announcement that is to be displayed in the DPTE Player. Text can be styled as in a Text Stimulus Item, using the toolbar below the text area.
- 5) Formatting Toolbar: Used to format the Announcement Text; includes font, size, styles, color, alignment, and bullet options. Note that Subject Variables can be inserted into the text and will be resolved by the software.
- 6) New button: Used to create a new Announcement. A new Announcement is created with a default unique name (such as "Announcement 562"). You can change the name to a more

meaningful one in the Distinct Name field but it must remain unique within this Experiment. You will have to Save or Cancel any changes you have made to the current Announcement before you are able to create a new Announcement.

- 7) Delete button: Used to delete the currently selected Announcement. You must Save or Cancel any changes before you are able to delete a Announcement.
- 8) Save/Cancel: Used to save changes or to cancel current changes to the Announcement.

Branches screen

This section explains the Branches screen, which allows the researcher to create and manage Branches for the Experiment.

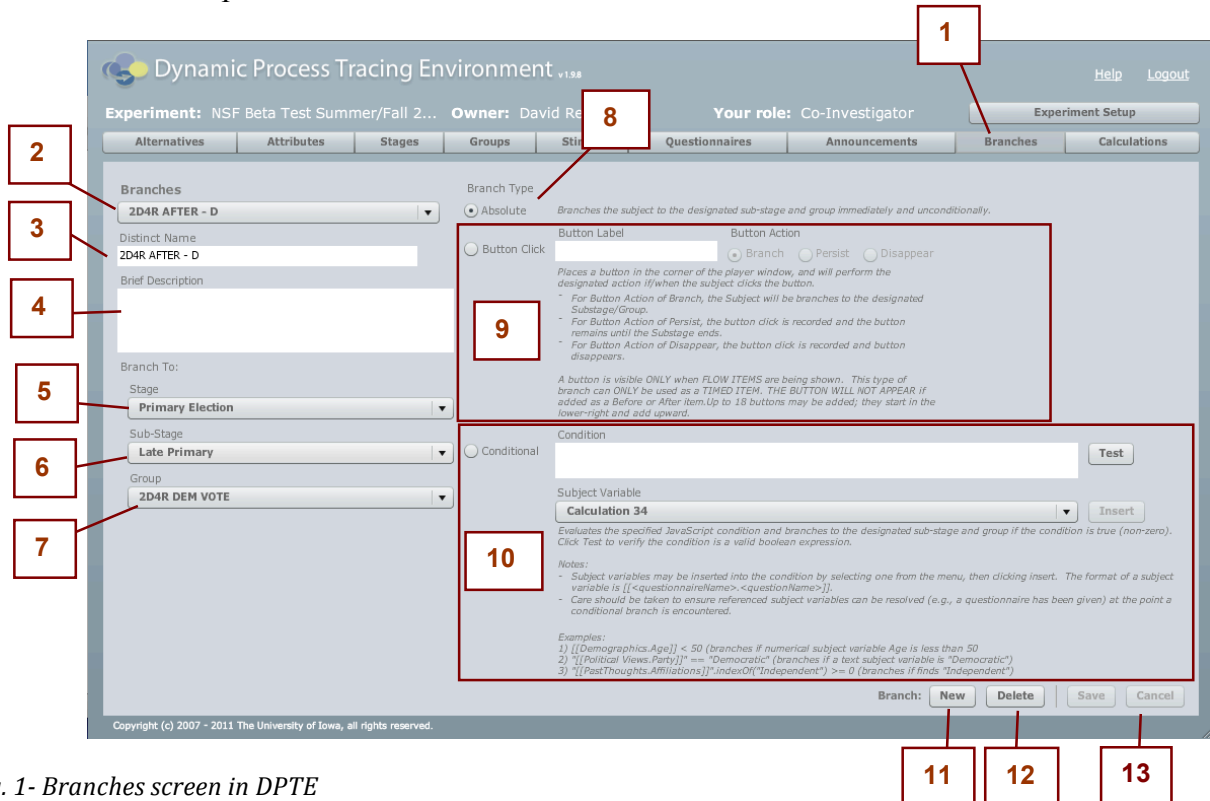


Fig. 1- Branches screen in DPTE

- 1) Branches tab: used to select this screen.
- 2) Branch menu: Use this menu to switch between the Branches you have created for this Experiment.
- 3) Distinct Name: The name of the Branch. This is used in listing Branches for addition to Sub-stages as Before, Timed, Flow, After, or Follow-on Items. Also, each Branch has an associated Subject Variable that keeps track of the number of times the Branch is executed during the Experiment. The Subject Variable is of the form

br.branchName

where branchName is the distinct name of the Branch.

- 4) Brief Description: A description of the Branch. For the Researcher's reference only.

- 5) Stage Menu: Used to select the Stage that the DPTE Player will jump to when the Branch is executed.
- 6) Sub-stage Menu: Used to select the Sub-stage (within the selected Stage) that the DPTE Player will jump to when the Branch is executed.
- 7) Group Menu: Used to specify the Group that the Subject will be transferred to when the Branch is executed. If no change in Group is desired, select “Current Group” and the Subject will not change Groups.
- 8) Absolute Branch: Indicates that the Branch type is to be Absolute. Absolute Branches cause the DPTE Player to jump to the given Stage and Sub-stage immediately, without condition, when these types of Branches are encountered. The Subject Variable associated with the Branch (br.branchName) is incremented when the Branch is executed.
- 9) Button Click Branch: Indicates that the Branch is a Button Click Branch. **Button Click Branches can only be used as Timed Items or Follow-on Items**, during the Flow Phase of a Sub-stage. In that case, a Button with the given label is displayed in the DPTE Player at the specified time, while Flow Items are being displayed. If you attempt to use a Button Click Branch as a Before or After item the Branch is ignored (Branches are never Flow Items).

The button label may contain a maximum of 15 characters. Up to 18 buttons may be displayed at the same time; the first button will appear in the lower-right corner, and up to nine will stack upward, until the 10th is displayed in the lower corner of the left side.

There are three possible Button Actions:

The most common Button Action is *Branch*. If the Subject clicks the button then the Branch is executed. If it isn't clicked the button remains in place until the end of the Sub-stage.

The *Persist* Button Action does nothing when the Subject clicks it. No Branch is executed, and the button remains in place until the end of the Sub-stage.

The *Disappear* Button Action also does not execute the Branch when clicked on, but when clicked, it disappears.

A Button Click Branch's Subject Variable is incremented every time the Subject clicks on the button during the Experiment. Therefore for each time a Button Click Branch's button is presented, the corresponding Subject Variable might be incremented once (for *Branch* or *Disappear* Actions) or several times (for the *Persist* Action).

- 10) Conditional Branch: Used to set the Branch as a Conditional Branch. When this Branch is used as a Before, After, Timed, or Follow-on Item, the DPTE Player evaluates the specified JavaScript condition and branches to the designated Sub-stage and Group if the condition is true. If the Branch is taken, the Branch's Subject Variable is incremented.

Any legal JavaScript code can be used as the Branch's Condition, but it must evaluate to a Boolean value. Use the "Test" button to verify your code is a valid Boolean expression.

Subject Variables may be inserted into the condition by selecting one from the menu, then clicking Insert. The menu at the bottom will contain all currently-defined Subject Variables for the Experiment, and you can select one from the menu and click Insert to insure that the syntax is correct. Care should be taken to insure that, during the flow of the Experiment, the referenced Subject Variables can be resolved (i.e. a Questionnaire has been presented, etc.) at the point that the Conditional Branch is encountered.

Examples:

`[[Demographics.Age]] < 50` (branches if numerical subject variable Age is less than 50)
`“[[Political Views.Party]]” == "democratic"` (branches if the text Subject Variable is "democratic" OR "Democratic" – lowercase is always used for comparisons)
`“[[PastThoughts.Affiliations]]”.indexOf("independent") >= 0` (branches if it finds "independent" anywhere in the value of the Subject Variable)

Note that Subject Variables of text format must be inserted within quotation marks, since JavaScript is making a string to string comparison after the Subject Variable is resolved by the DPTE Player.

Also note that all string comparisons must use lower-case text. To insure that the case of responses does not matter, Text Subject Variables are converted to lower-case before comparison; the string compared must be lower-case too, i.e. "democratic" in the 2nd example. This will match a Subject response of "Democratic", "democratic", etc.

- 11) New button: Used to create a new Branch. A new Branch is created with a default unique name (such as "Branch 562"). You can change the name to a more meaningful one in the Distinct Name field but it must remain unique within this Experiment. You will have to Save or Cancel any changes you have made to the current Branch before you are able to create a new Branch. NOTE: Set the Stage, Sub-stage, and Group menus *after* creating a new Branch, otherwise you will be modifying an existing Branch. If there are no Branches, however, you must set those menus beforehand to enable the New button.
- 12) Delete button: Used to delete the currently selected Branch. You must Save or Cancel any changes before you are able to delete a Branch.
- 13) Save/Cancel: Used to save changes or to cancel current changes to the Branch.

Calculations screen

This section explains the Calculations screen, which allows the researcher to create and manage Calculations for the Experiment.

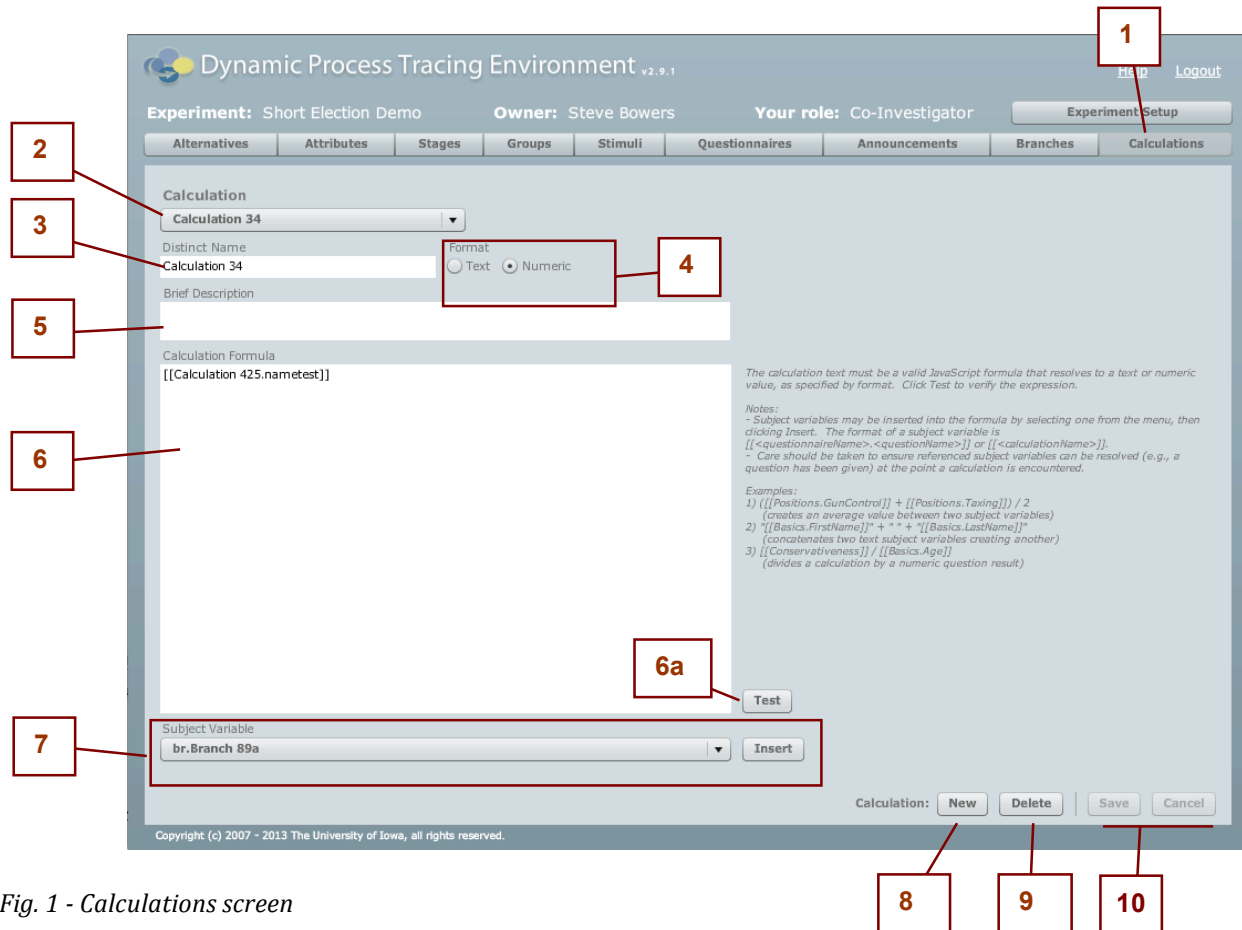


Fig. 1 - Calculations screen

- 1) Calculations tab: used to select this screen.
- 2) Calculation menu: Use this menu to switch between the Calculations you have created in this Experiment.
- 3) Distinct Name: The name of the Calculation; must be unique within this Experiment and provides a unique name with which to identify the results of the Calculation via a Subject Variable.
- 4) Format: Used to specify whether the result of the Calculation will be a Text or Numeric value. The result will be stored in the system accordingly when the calculation is evaluated.
- 5) Brief Description: A description of the Calculation. For the Researcher's reference only.

- 6) Calculation Formula: Used to specify the formula used for the Calculation. The Calculation Formula must be a valid JavaScript formula that resolves to a text or numeric value, as specified by the Format. Click Test (6a) to verify that the expression is valid JavaScript.

Examples:

```
([[Positions.GunControl]] + [[Positions.Taxing]]) / 2  
// creates an average between two (hypothetical) Subject Variables, where GunControl and  
// Taxing are Questions and Positions is a Questionnaire.
```

```
"[[Basics.FirstName]]" + " " + "[[Basics.LastName]]"  
// concatenates two text Subject Variables creating another
```

```
[[Conservativeness]] / [[Basics.Age]]  
// divides a Calculation by a Subject Variable from a Questionnaire
```

- 7) Subject Variables menu: Used to insert Subject Variables into the formula by selecting one from the menu, then clicking insert. The format of the Subject Variable is `[[questionnaireName.questionName]]` (for Questions), `[[br.branchName]]` for Branches, or `[[calculationName]]` for Calculations.

Note: Subject Variables of text format must be surrounded by quotation marks. Care should be taken to ensure that any referenced Subject Variable can be resolved (e.g. a Question that defines the Subject Variable has been presented) at the point when a Calculation is encountered.

- 8) New button: Used to create a new Calculation. A new Calculation is created with a default unique name (such as "Calculation 562"). You can change the name to a more meaningful one in the Distinct Name field but it must remain unique within this Experiment. You will have to Save or Cancel any changes you have made on this screen before you are able to create a new Calculation.
- 9) Delete button: Used to delete the currently selected Calculation. You must Save or Cancel any changes before you are able to delete a Calculation.
- 10) Save/Cancel: Used to save changes or to cancel current changes to the Calculation.

Section Three

Social Experiment Documentation

This documentation covers the DPTE Social Experiment features included in the software as a result of the Carnegie-Melon grant.

The documentation explains the Social Experiment features, and how to set them using the Experiment Settings. It explains the options for Shared Items, Shareable Items, and Commenting, and covers how to designate Items as Shared and/or Shareable. The last section covers the ways in which a Researcher can manage the Social Data created by Subject interaction with a Social Experiment.

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DPTE Social Features Overview

Social Features in DPTE create a pseudo-social environment in which users can “share” information with one another and provide feedback on DPTE items that others can view. Some of this social environment is genuine while other aspects are simulated. The Researcher has full control over the content which can be modified or removed as needed.

Social Experiments can contain simulated Shared Items, and Subjects can provide feedback on Shareable Items by clicking Feedback Buttons and/or leaving Comments.

Shared Items are designated by the Researcher for a given Stage, Sub-stage, and Group in the Timed Items section. Shared Items are simply Timed Items, but they do not appear the way normal Timed Items do; instead a Shared Item has an Introduction screen that informs the Subject that another user has shared that Item with them. The Subject then has the option to click on the Item to view it or to dismiss the Introduction without viewing the Item. In this case, the Sharing is being simulated by the Researcher, who has pre-determined which Items to “share.”

Shareable Items: Feedback Buttons and Comments

Feedback Buttons are a row of buttons that appear below each Shareable Item in DPTE (see Designating Shareable Items). Researchers define between 1 and 5 Feedback Buttons and clicks of these buttons are counted by the software, aggregated at the Experiment level (though they are segregated by Group by default).

When performed by the Subject, Sharing is a simulated action. The Researcher designates a "Share" button, and when the Subject clicks the Share button no actual action is taken by the software other than recording the Subject's action. If an Experiment presents Shared Items, however, it is a good idea to offer a “Share” button for the Subject to use as well—otherwise, how did those "other users" Share the Shared Items that the Subject viewed? Offering a "Share" button completes the illusion, as well as gathering data on what the Subject thought was Share-worthy.

Comments can be left on Shareable Items as well. These Comments are stored and show up for that Item on subsequent viewings to all Subjects in that Experiment (or Group, if segregated). In Read-Only mode, Comments left by Subjects aren't viewable by subsequent Subjects (see the “Read-Only Mode” section for details).

Just as the Researcher decides which Items are Shareable, s/he also decides whether Shareable Items allow Commenting.

In summary, a Subject in a DPTE Social Experiment may be able to:

- Click on Researcher-defined Feedback Buttons, such as “Share” or “Like”
- Leave a Comment on an Item
- View an Item that another “user” has “shared” with them

Setting Social Options in the Researcher Interface

The options for DPTE's Social Features are located on the **Experiment Setup** page. In the **Experiment Dashboard** panel, click the **Settings** button:

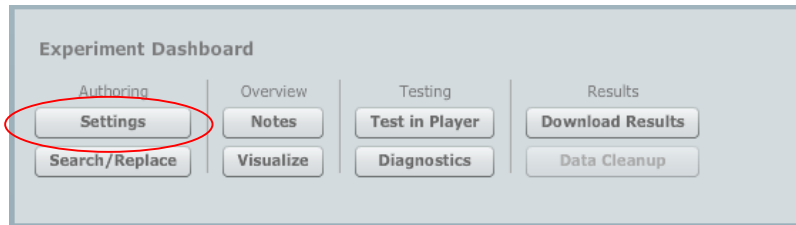


Figure 1: Settings button on the Experiment Dashboard

The **Social Experiment Options** are located in the 2nd tab of the **Experiment Settings** window:

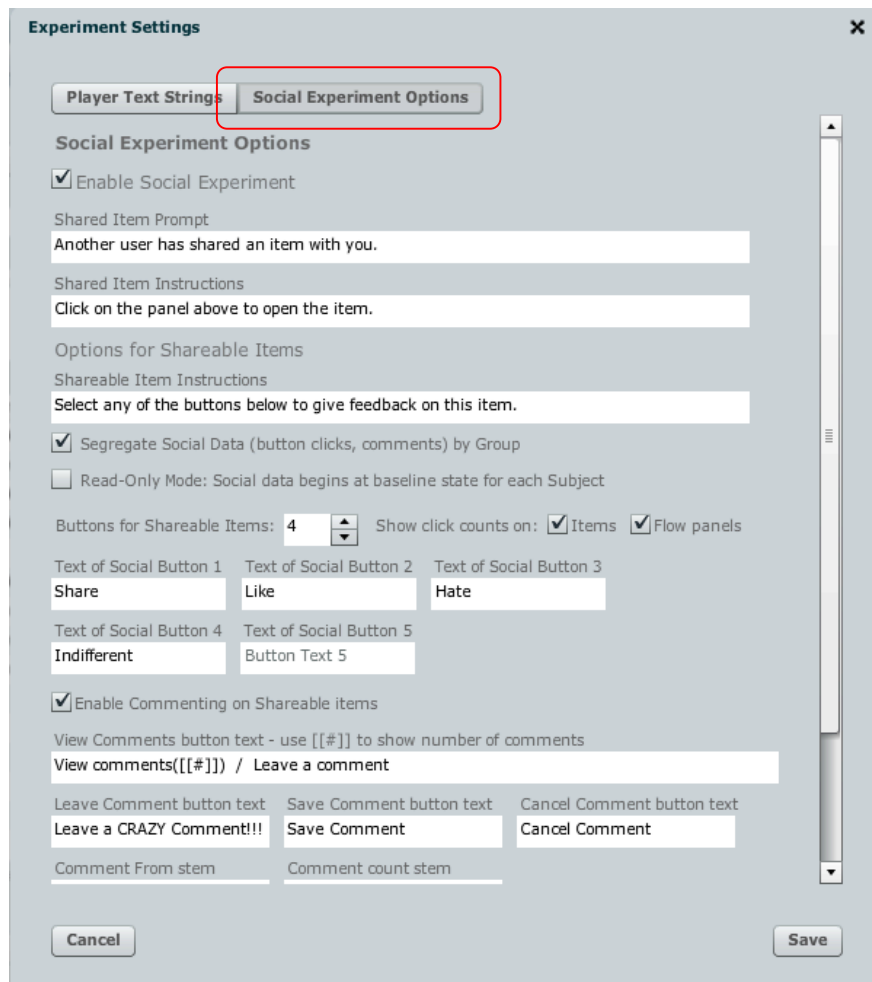


Figure 2: Experiment Settings window containing Social Experiment Options

Enabling a Social Experiment



Figure 3: Enable Social Experiment check box in Social Experiment Options

Clicking the **Enable Social Experiment** check box is necessary for any Social options to be utilized. Regardless of any other settings under Social Experiment Options, if this box is UNchecked then the Experiment will run as a normal, non-Social Experiment. In the DPTE Player, a system variable `[[SYS_VAR_SOCIAL_EXP]]` determines the Social state and can be changed to true or false using a Calculation icon with the same name.

Options for Shared Items

When a Subject is presented a Shared Item, there is an intermediate screen before the Item is presented. This screen gives the Subject the option to view or close the Item.



Figure 4: Example of a Shared Item, with Researcher-definable strings (Close button is off-screen).

There are two Researcher-definable strings, called the **Shared Item Prompt** and the **Shared Item Instructions**, which are circled in red above. They are defined in the Social Experiment Options directly below the Enable Social Experiment check box:

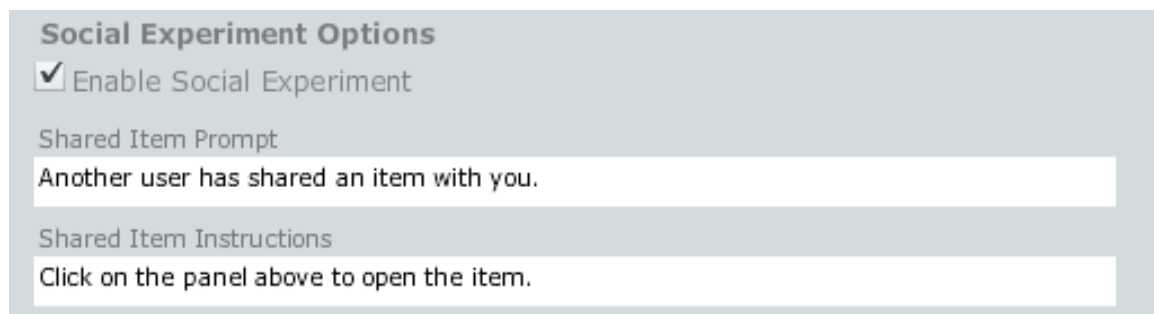


Figure 5: Definable strings: Shared Item Prompt and Shared Item Instructions

Options for Shareable Items

Directly below the small set of options for Shared Items is the more extensive section covering options for Shareable Items. This section includes all of the options for the Feedback Buttons that appear with Shareable Items, as well as Commenting options.

First, we present an example of a Shareable Item in action. Any Stimulus Item or Questionnaire that a Subject sees at any time might be tagged as a Shareable Item, in which case the Subject sees a variable number of Feedback Buttons across the bottom of the screen.

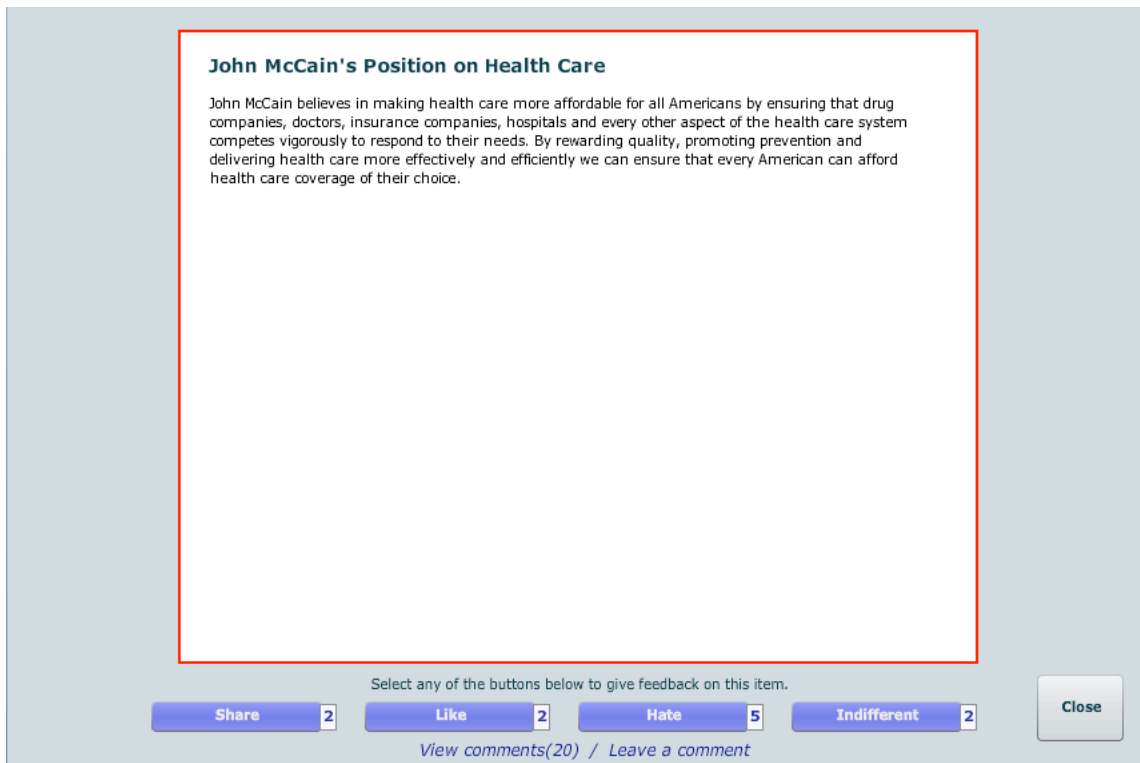


Figure 6: Example of a Shareable Item

The first thing to notice in this sample Text Stimulus Item is that the content area for the Item is smaller; this is necessary to allow room for the buttons/text at the bottom. Both Text and Image Items are shorter by 60 pixels vertically, so keep this in mind while authoring Experiments. Video Items remain the same size but are moved up to create space.

Like normal Video Items, Video Items that are Shareable do not display the “Close” button immediately. But unlike regular Video Items, Shared Video Items do not disappear automatically. Instead, when the video is finished, a Close button appears and the Subject uses it to close the Item manually. This gives the Subject time to select Feedback Buttons and/or read and leave Comments.

The Shareable Item feedback controls are located in the space at the bottom of the screen, below the Shareable Item's content; feedback controls consist of an Instructions String, one or more Feedback Buttons, and Commenting instructions:

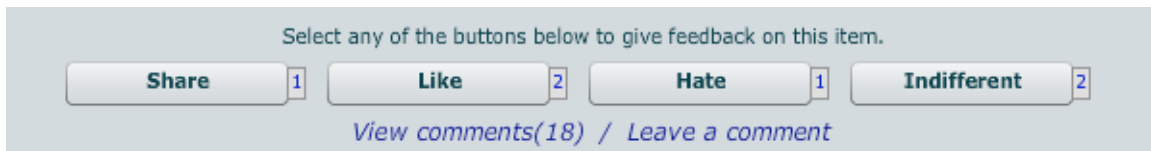


Figure 7: Close-up of feedback controls available to the Subject on a Shareable Item

The first Shareable Item option is the Instructions string, seen above the Feedback Buttons:

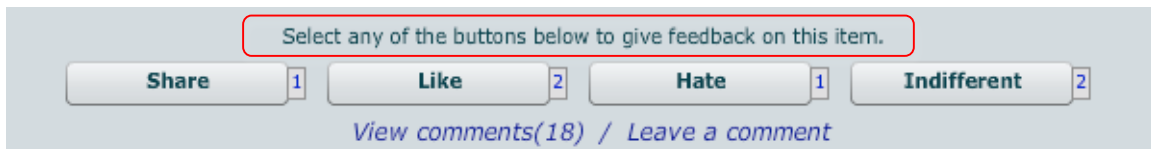


Figure 8: Shareable Item Subject feedback controls with Shareable Item Instruction circled in red

That text can be changed via the **Shareable Item Instructions** field under **Options for Shareable Items**:

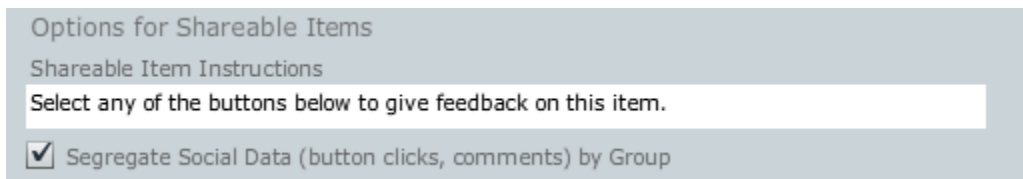


Figure 9: Shareable Item Instructions, and Segregate Social Data option

Figure 9 also shows the Segregate Social Data by Group check box. This is discussed in the section, **Segregating/Aggregating Social Data by Groups**, later in this document.

Shareable Item Feedback Buttons

The second "row" of feedback controls on a Shareable Item contains the Feedback Buttons:

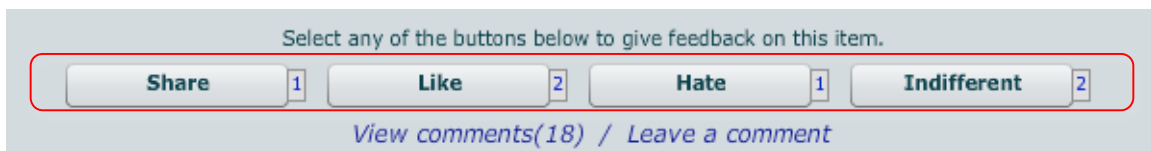


Figure 10: Shareable Item feedback controls with Feedback Buttons circled

The Feedback Buttons are specified just below the region noted in Figure 9.

Buttons for Shareable Items: 4 Show click counts on: Items Flow panels

Text of Social Button 1: Share
Text of Social Button 2: Like
Text of Social Button 3: Hate
Text of Social Button 4: Indifferent
Text of Social Button 5: Button Text 5

Figure 11: Specifications for Feedback Buttons in Social Experiment Options

The counter labeled **Buttons for Shareable Items** controls how many Feedback Buttons (0 to 5) show up on each Shareable Item. The Text of the buttons is defined in the five fields below (**Text of Social Button 1**, etc.). Button text can be up to 25 characters, but should be shorter as only 13-15 characters are normally visible in a button label.

There are also two check boxes that determine whether the Button Click Counts are displayed on Items and/or Flow Panels.

Buttons for Shareable Items: 4 Show click counts on: Items Flow panels

Text of Social Button 1: Share
Text of Social Button 2: Like
Text of Social Button 3: Hate
Text of Social Button 4: Indifferent
Text of Social Button 5: Button Text 5

Figure 12: Feedback Button options with Click Count options circled

DPTE keeps track of every Feedback Button selected by Subjects and aggregates this data for each Item. In other words, if a Subject clicks on Button #1 (Share, in this example) then DPTE increments a counter for that Button and Experiment (and optionally per Group; see **Segregating/Aggregating Social Data by Groups**).

When we refer to an Item's Click Counts we mean the aggregate number of clicks for each Feedback Button for that Item. In the example above, the first check box (**Show click counts on Items**) tells DPTE to display a Click Count alongside each Feedback Button:

Select any of the buttons below to give feedback on this item.

Share 1 Like 2 Hate 1 Indifferent 2

[View comments\(18\) / Leave a comment](#)

Figure 13: Shareable Item controls, Click Count visible for each Feedback Button

We've seen this in our examples all along. When the Subject selects a button, it toggles to a selected state; another click toggles it to unselected. When the Subject closes the Item,

the Button clicks are incremented. A Recorded Event (see Section One) is sent to record that the Subject has clicked on a button(s); this is separate from the Click Counts stored for each Item.

If we UNcheck the **Show click counts on Items** box in the Experiment Settings, the row of Feedback Buttons looks like this:

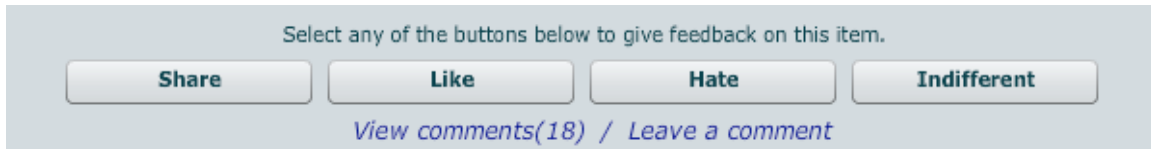


Figure 14: Shareable Item controls, no Click Counts on Feedback Buttons

With this option, the Subject doesn't see the amount of Subjects that have clicked on the various Feedback Buttons. It does allow for slightly longer Button names without truncation.

Click Counts can also be displayed on Flow Panels, which is what the 2nd check box, **Show click counts on Flow panels** does. An example of a Flow Panel displaying Click Counts is below:

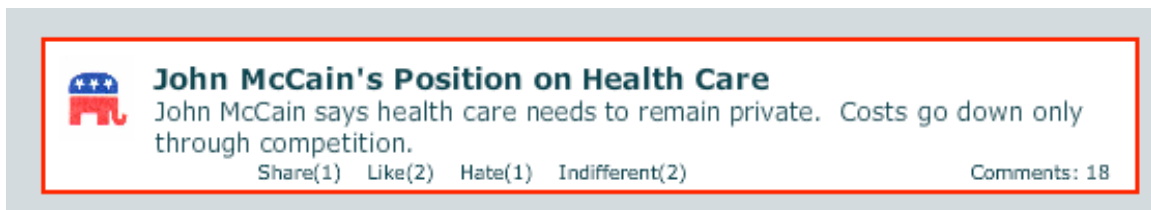


Figure 15: Flow Panel with Click Counts display enabled

When the display of Click Counts is enabled, the rest of the text on the Flow Panel is moved up slightly to accommodate the Feedback Button names and Click Counts.

Note that if Commenting is enabled and Show Click Counts on Flow Panels is checked, the number of Comments will also be displayed. The format used is specified in the **Comment count stem** text field (see **Comments for Shareable Items**, below).

Comments for Shareable Items

Another feature of Shareable Items is the ability of the Subject to leave comments. Commenting is enabled using the **Enable Commenting on Shareable Items** check box.

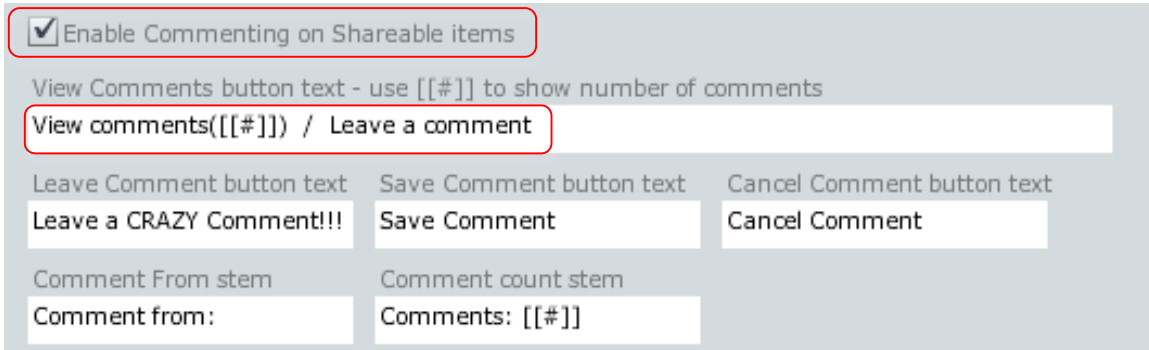


Figure 16: Commenting check box and View Comments button text circled in red

If the check box is not checked, no Comments can be viewed or added by a Subject, and the rest of the Commenting options cannot be altered.

If Comments are enabled for an Experiment, then the lower part of the Shareable Item looks like this:

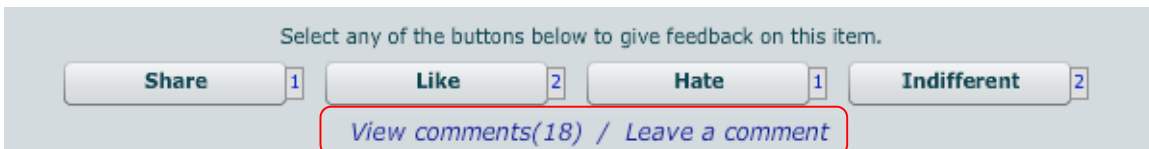


Figure 17: View Comments button text (circled in red) as it appears at the bottom of a Shareable Item

The Subject clicks this text to both view and leave comments, so it's best to reflect that in the text you use in the **View Comments button text**. The symbol `[[#]]` anywhere in the string will be replaced by the number of Comments left for that Item, as shown in Figure 17.

When the Subject clicks on the Comment button text, the Comment window is opened (see **Comment Window** section on the next page).

If Commenting is not enabled, a Shareable Item does not display any text below the Feedback Buttons, and clicking in the area does nothing.



Figure 18: A Shared Item in an Experiment where Commenting is not enabled.

Comment Window

The Comment Window is opened by the Subject by clicking on the View Comments button text at the bottom of a Shared Item, below the Feedback Buttons.

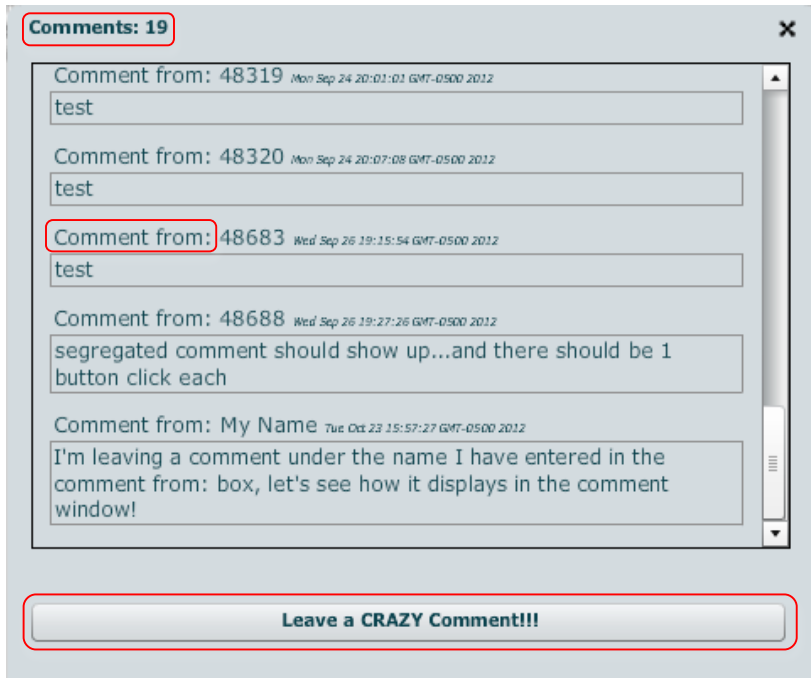


Figure 20: Comment Window with obviously customized Comment Button; default is “Leave Comment”

The Comment Window shows a scrolling field containing the Comments entered so far for this Item (possibly segregated by the Subject’s Group; see **Segregating/Aggregating Social Data by Groups**). The top line tells who the Comment is from (see **Entering Comments**) and includes a timestamp. The Comment itself appears in a box below, which expands depending on the length of the Comment.

The Window also shows the number of comments, and has a button for the Subject to leave a comment. The Researcher-definable strings are circled on both Figure 20 above and Figure 21 below:

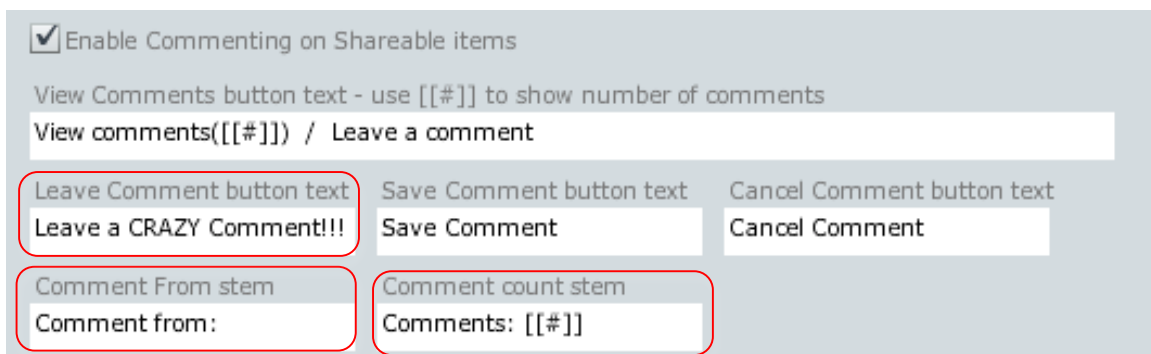


Figure 21: Commenting options with Comment window strings circled in red

Entering Comments

Comments: 19

Enter your comment in the box below:

Comment from: My Name

I'm leaving a comment|

Cancel Comment Save Comment

Figure 22: Leaving a comment

When the Subject clicks the Comment Button in the Comment Window, the view changes to a form that allows the Subject to enter a Comment. A space is provided for a name to be entered; this name shows up as in Figure 20. By default, this field shows the Subject's Subject Id. Once a name has been entered, the software keeps the name associated with the Subject in a Subject Variable, `[[SYS_VAR_SUBJECT_NAME]]`.

The Comment itself is entered in the large box. The Subject can either Cancel or Save the Comment; either option brings the Subject back to the first Comment Window screen. The 'X' must be used to close the Comment Window.

Figure 23 shows the correspondence between text strings on the Comment Entry screen and the Commenting options in the Researcher interface:

Enable Commenting on Shareable items

View Comments button text - use `[[#]]` to show number of comments

View comments([[#]]) / Leave a comment

Leave Comment button text: Leave a CRAZY Comment!!!

Save Comment button text: Save Comment

Cancel Comment button text: Cancel Comment

Comment From stem: Comment from:

Comment count stem: Comments: [[#]]

Figure 23: Fields used to define Comment Entry screen in Figure 22

The Comment Prompt text and the Comment Accepted text are defined in the Commenting section of the Social Experiment Options as well:

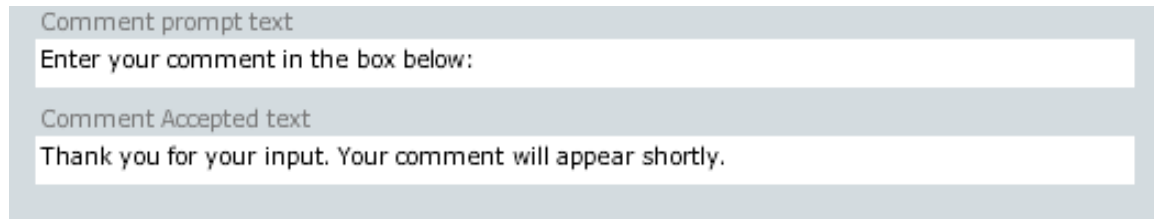


Figure 24: Comment prompt text and Comment Accepted text

You can see the Comment prompt text in Figure 22; its purpose is to give the Subject some instruction on how to fill out a Comment.

The Comment Accepted text is used in the Comment Window after a Subject has entered a Comment. New Comments entered by a Subject don't appear immediately in the Comment Window so it's best to reflect that in the message (they appear the next time the Comment Window is opened). This message appears just above the Comment button, as seen in Figure 25.

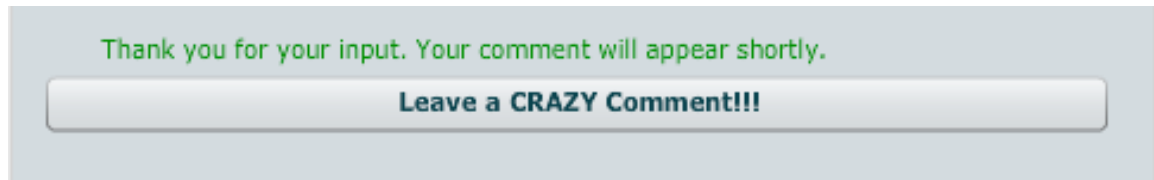


Figure 25: Comment Accepted text (in green) appearing on the Comment Window screen.

Segregating/Aggregating Social Data by Groups

The check box just under Options for Shareable Items determines whether data collected from Subjects for a Shareable Item will be segregated by Group, or aggregated for all Groups.

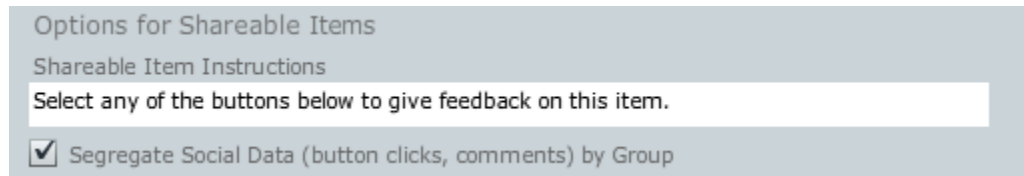


Figure 26: Segregate Social Data check box

In the DPTE database, Feedback Button clicks and Comments are **always** tagged with the Group of the Subject that clicked the Button or left the Comment. If the box above is checked, then only Subjects within the same Group will see the click incremented or see the Comment. In other words, if an Item is used in both Group A and Group B and is Shareable in both, Subjects in Group A won't see clicks or Comments left by Subjects who were in Group B and vice versa.

If unchecked, all clicks and Comments will be visible for that Item regardless of where it is encountered. If an Item is only used within one Group, or is Shareable in only one Group, this option won't make any difference for that Item.

The segregation option is useful in the case where an Item's Attribute or Alternative could be different in different Groups, rendering some Comments potentially confusing. By default this box is checked and segregation by Groups will occur.

Note on Congruency: If Congruency for a Group/Substage is set to anything other than 100% or 0%, then different Subjects may see the same Item differently, as it will be assigned to a different Alternative. In that case, Comments made with a Congruent Item might not make sense if seen by a Subject who sees that Item as Incongruent (see Section One for further explanation of Congruency).

Specifying Items as Shared and/or Shareable

Any Stimulus Item or Questionnaire can be specified as Shareable, and any Stimulus Item or Questionnaire used as a Timed Item can be designated as Shared, as long the Experiment is a Social Experiment (See **Enabling a Social Experiment**).

Specifying Items as Shareable

When an Experiment is a Social Experiment, there is an extra column of check boxes (titled, Shareable) visible in all five Sub-stage screens (Before Items, Timed Items, Flow Items, After Items, and Follow-on Items).

Flow Items in Sub-stage for Group				
<input checked="" type="checkbox"/>	Flow Item	Shows	Shareable	?
<input type="checkbox"/>	Image: Healthcare-Clinton	7	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Image: Healthcare-McCain	1	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Image: Iraq-McCain	1	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Text: Healthcare-Conserv	3	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Text: Healthcare-Neutral	4	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Text: Iraq-Conserv	5	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Text: Iraq-Liberal	5	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Text: Iraq-Neutral	5	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Video: Healthcare-Clinton	3	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Video: Healthcare-McCain	1	<input checked="" type="checkbox"/>	<input type="radio"/>
<input type="checkbox"/>	Video: Healthcare-Obama	1	<input checked="" type="checkbox"/>	<input type="radio"/>

Figure 27: Shareable column on Flow Items screen

Any Stimulus Item or Questionnaire marked Shareable will contain the feedback controls enabled in the Experiment Settings, and display as in Figure 6 and 7. Depending on the number of buttons specified and whether Commenting is enabled, there will be more or fewer options.

Specifying Items as Shared

In addition to the Shareable field, the Timed Items screen also has a “Shared” field when an Experiment is enabled as a Social Experiment.

Timed Items in Sub-stage for Group									
✓	Hrs	Min	Sec	⊙	Timed Item	Type	Shared	Shareable	?
<input type="checkbox"/>	00	00	05	⌚	Text: Healthcare-Conserv	stim	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	○
<input type="checkbox"/>	00	02	10	⌚	Image: Healthcare-Clinton	stim	<input checked="" type="checkbox"/>	<input type="checkbox"/>	○

Figure 28: Timed Items screen with Shared and Shareable columns

A Shared Timed Item appears to the Subject as in Figure 29, with an intermediate introduction screen that contains a Flow Panel.

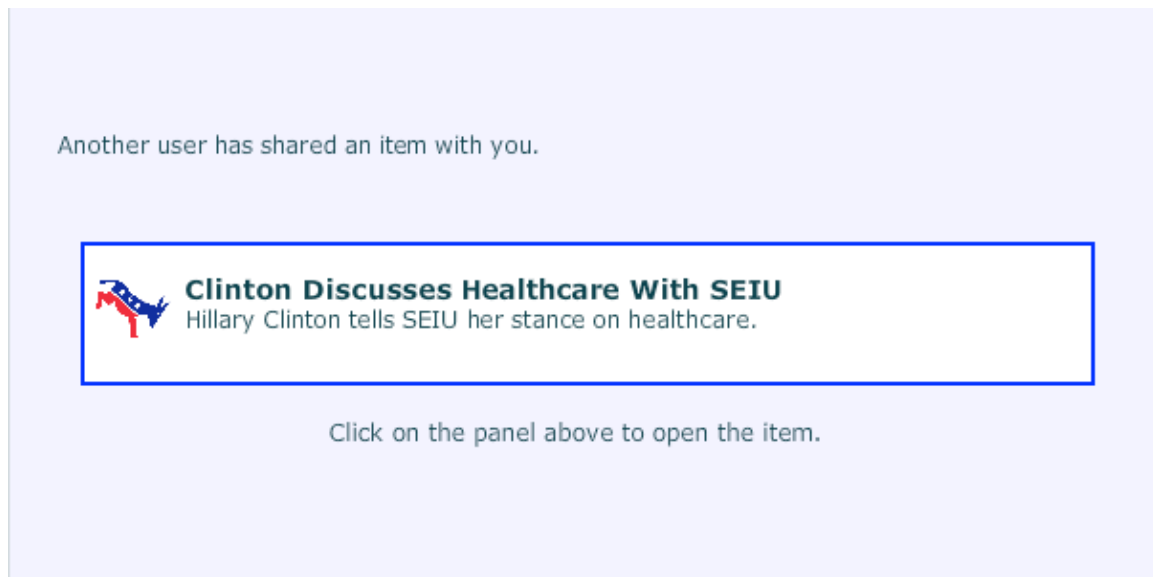


Figure 29: “Intro” screen for Timed Item designated as “Shared” (Note: Close button is off-screen)

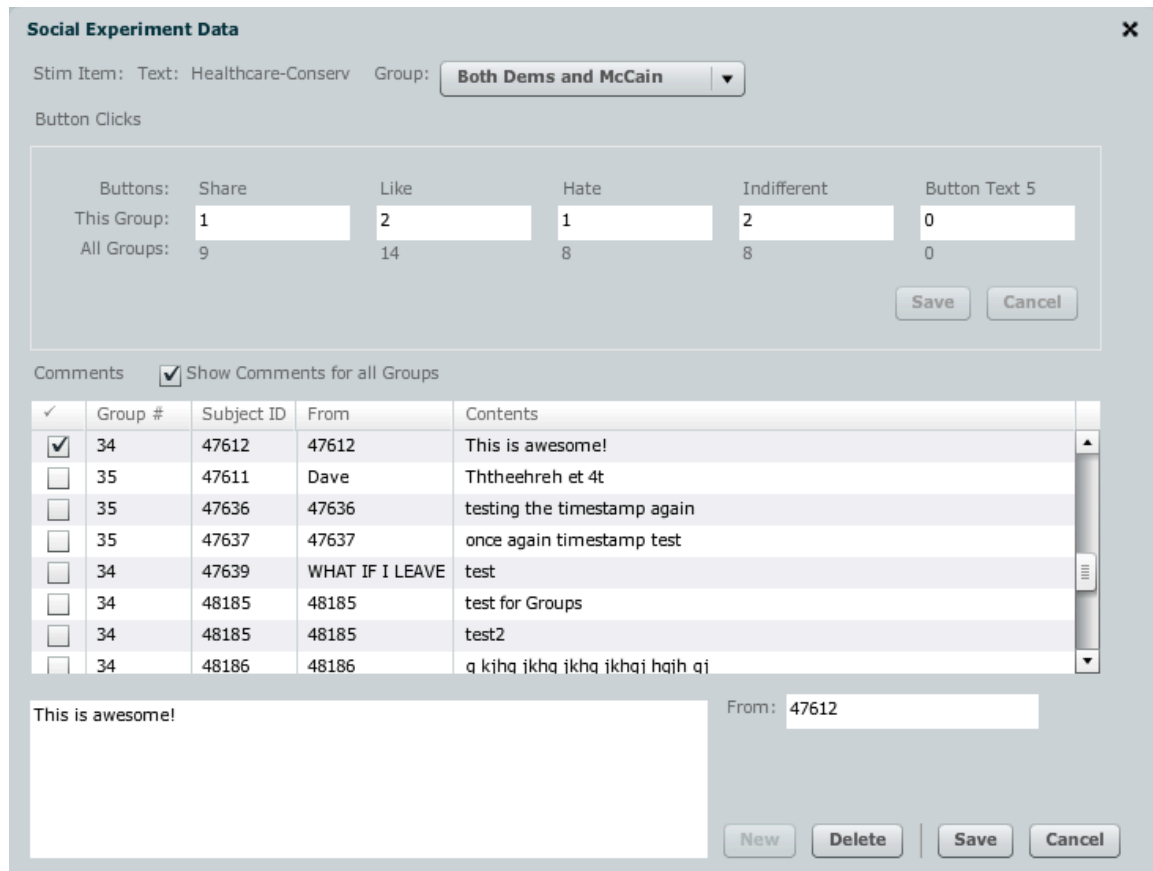
It makes sense for any Timed Item marked Shared to also be Shareable; otherwise, how did the (hypothetical) “other user” share the Item with you in the first place? Therefore, Shared Items should also be Shareable and include a "Share" button. But in general, despite the name, Shareable Items might or might not have an actual "Share" button.

Important Note: If you uncheck Enable Social Experiment for an Experiment, then all of the Timed Items you specified as Shared Items will show up as normal Timed Items; that is, they will appear without the intermediate intro screen. DPTE remembers the settings, however, so once you re-enable the Social Experiment, these Timed Items will again appear as Shared Items.

As of release 3.0, Stimulus Items and Questionnaires can be Shared; other Items (Announcements, Branches, Calculations) cannot be designated as such.

Modifying, Adding, and Deleting Clicks and Comments

Social Data can be modified via the Modify Social Data button on the Stimulus Item and Questionnaires screens. This brings up the Social Experiment Data for that Item.



The screenshot shows the 'Social Experiment Data' window. At the top, it displays 'Stim Item: Text: Healthcare-Conserv' and 'Group: Both Dems and McCain'. Below this, there are input fields for 'Button Clicks' for five categories: Share, Like, Hate, Indifferent, and Button Text 5. The counts for 'This Group' are 1, 2, 1, 2, and 0 respectively, while 'All Groups' totals are 9, 14, 8, 8, and 0. There are 'Save' and 'Cancel' buttons. Below the clicks section is a 'Comments' section with a checked box for 'Show Comments for all Groups'. A table lists comments with columns for Group #, Subject ID, From, and Contents. The first comment is selected. Below the table is a text box for editing the selected comment, currently containing 'This is awesome!', and a 'From:' field with '47612'. At the bottom are 'New', 'Delete', 'Save', and 'Cancel' buttons.

Buttons:	Share	Like	Hate	Indifferent	Button Text 5
This Group:	1	2	1	2	0
All Groups:	9	14	8	8	0

✓	Group #	Subject ID	From	Contents
<input checked="" type="checkbox"/>	34	47612	47612	This is awesome!
<input type="checkbox"/>	35	47611	Dave	Ththeehreh et 4t
<input type="checkbox"/>	35	47636	47636	testing the timestamp again
<input type="checkbox"/>	35	47637	47637	once again timestamp test
<input type="checkbox"/>	34	47639	WHAT IF I LEAVE	test
<input type="checkbox"/>	34	48185	48185	test for Groups
<input type="checkbox"/>	34	48185	48185	test2
<input type="checkbox"/>	34	48186	48186	q kija ikhq ikhq ikhqj hqjh qj

Figure 30: Social Experiment Data for an Item

The Social Experiment Data window shows the Button Clicks and Comments for the given Item (listed at the top after Stim:Item). Since Clicks/Comments can be segregated by Group, the Group: menu determines which ones are shown. For Clicks, the line that reads “This Group:” shows the Button Click Counts for the chosen Group, while the next row (“All Groups:”) gives a total for all Groups. For Comments, the Group # is listed in the Grid. If “Show Comments for all Groups” is checked, all Comments will appear in the grid, as in the example above.

The Button Click Counts for an Item can be changed as needed for any Group. The “All Groups” total is re-figured by the software, so in order to change it you have to choose a Group to add to/remove from.

Comments can be added (with New), removed (with Delete), and modified. To modify a Comment, select it in the grid, edit it in the box below, then Save. “New” can only be used when no Grid lines are selected, and Delete is available only if at least one line is selected.

Rectangular Data Set Changes

In DPTE version 3.0 there were a number of additions to the Rectangular Data Set for Social Experiment data, in a "Social Data" file set. For a full summary of the Rectangular Data Set, see Section One.

The "Social Data" file set contains a pair of files for each Sub-stage that has Social Data. Sub-stages with no Social activity do not generate a file pair. If an Experiment is not currently a Social Experiment, then this file set is not generated at all.

The first Social Data file is the Shareable Items sub-file. Each Subject has the following columns:

- Subject Id
- Researcher-Assigned ID
- Date (YYYYMMDD format)
- Time (in 24-hour HHMM format)
- For each Shareable Item, there is information on Button Clicks and Comments:
 - one column for each defined Social Button, noting the number of times the Subject clicked that button during the Sub-stage.
 - if Comments are enabled, there are two additional columns recording whether the Comment window was opened and whether a Comment was left for this item.

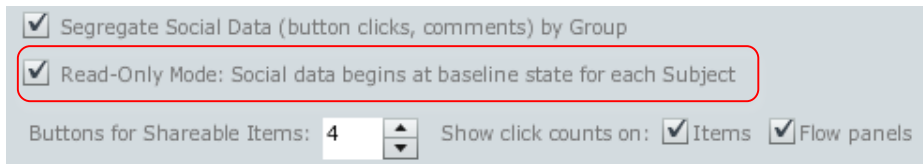
The second Social Data file is the Alternatives sub-file. It also contains the first four columns from above, and adds, per Alternative, the information on Button Clicks and Comments described above (but for Alternative).

It is important to note that the Shareable Items gathered into columns for the Rectangular Data Set are based on the current state of the Experiment. That is, if you modify which Items are Shareable, then there will be different columns included in the Data Set. The Recorded Events file is used to see the activity of the Subject, but whether or not the Item is examined is determined by its current state in the Experiment. So as we noted in Section One, it is best not to make modifications to an Experiment after any important data collection has begun. And, if anything in the Rectangular Data Set seems unusual, the data should be cross-referenced with the Recorded Events file (see Section One).

Resetting Social Data per Subject, i.e. “Read-Only” mode

There are times when a Researcher might want an Experiment to be unaffected by a Subject’s social feedback; in other words, it can be helpful to start all Subjects with a “clean slate” as far as Button Click Counts and Comments are concerned.

If this is the case for your Experiment you should enable “Read-Only” mode in the Social Experiment Options.



The screenshot shows a settings panel for social experiment options. It includes three checked checkboxes: 'Segregate Social Data (button clicks, comments) by Group', 'Read-Only Mode: Social data begins at baseline state for each Subject' (highlighted with a red box), and 'Show click counts on: Items' and 'Flow panels'. Below these are controls for 'Buttons for Shareable Items' set to 4 and 'Show click counts on' with checkboxes for 'Items' and 'Flow panels'.

Specifying Read-Only mode does the following:

- Button clicks are incremented as normal during the Experiment, but these button clicks are not stored in the database. Therefore, subsequent Subjects will not see these clicks added to the total—only the current Subject will see them.
- Comments added by the Subject will be visible only to that Subject, not to subsequent Subjects.

Note that Recorded Events will still show the Feedback Buttons being clicked. And the Comments left by the Subject will be stored in the database, but they are ignored for future Subjects.

The Comments that the Subject will see are only those that the Researcher has added using the Researcher Interface, as well as those added by the Subject him/herself. If the Experiment is run again with Read-Only mode off, all Comments will be visible.

Turning Read-Only Mode off does not “restore” any button clicks, since these are not stored in the database. With Read-Only Mode off, however, subsequent button clicks will be stored as normal once again.

To summarize: Comments are always stored, but in Read-Only Mode they are invisible to subsequent Subjects. Button clicks are not stored in Read-Only Mode and only the current Subject sees the totals increase.